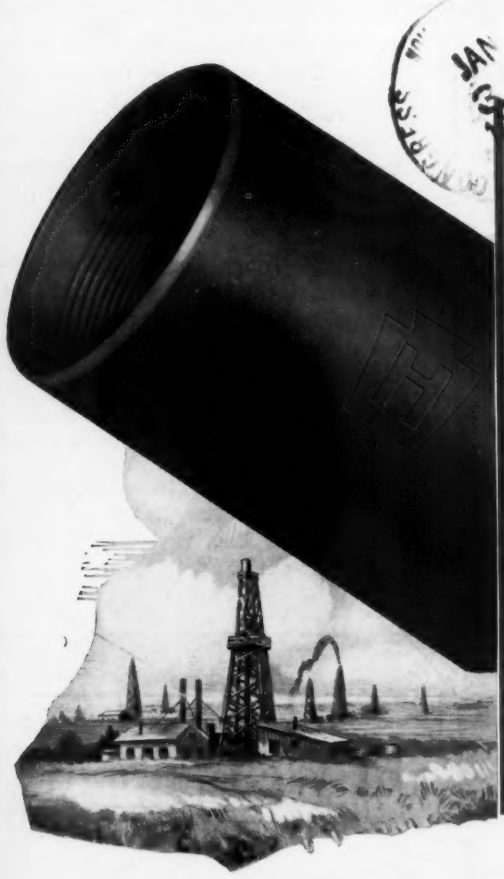
Annual Statistical Edition Covering 1922
A Journal for
Oil Producers and Field Men

The OIL WEEKLY

Published Weekly At Houston, Texas

HOUSTON PITTSBURGH TULSA
LOS ANGELES WICHITA FALLS CHICAGO

Vol. 28. No. 4 JANUARY 20, 1923 50 Cents Per Copy



Harrisburg has given a new meaning to the word coupling

It isn't difficult to produce a coupling which is merely "a contrivance to couple, or bring together, two adjacent parts or objects"—in this case two pieces of pipe.

But Harrisburg has perfected a coupling which brings and **holds** them together with greater dependability and greater economy under every stress of service.

Here's the definition of Harrisburg Forged Seamless Steel Couplings written from the every day experience of hundreds of Harrisburg users.

"A coupling forged seamless to double strength because of the Harrisburg special oil field steel from which it is made. A coupling without a weld or weakness. A coupling with perfect thread and perfect taper. A coupling without piping to develop leaks."

Manufactured by
HARRISBURG PIPE & PIPE BENDING COMPANY
Harrisburg, Pa.

Sold by
HARRISBURG PIPE & PIPE BENDING CO. OF TEXAS, INC.
Houston, Texas

HARRISBURG
Forged Seamless Steel Couplings

"OILWELL" Tongs

"OILWELL" ESTD. 1862. TRADE MARK. (REGISTERED)

Open

Closed

The PERFECT JAW TWO HALF CIRCLES

For Jerk Line or Rotary Work

Simplest, Sturdiest, Most Positive Tongs Made

ADJUSTABLE-BALANCED

¶ The Bit Liners are cam shaped, moving forward and in as the Handle moves forward—this forces the three toolsteel Bits to grip slowly, smoothly, and positively, without crushing effect.

¶ By using one set of Jaws, and one Handle, a number of different sizes of pipe, casing and tool joints can be operated by merely bushing the Jaws with the proper Plain and Bit Liners.

¶ "Oilwell" Tongs are accident proof—no hooks, catches, or automatic locks are used. Once the Locking Pin is inserted, the Jaws cannot be opened until the Pin is removed.

¶ "Oilwell" Tongs are self-balancing—the Suspension Chain is so mounted that the Tongs balance perfectly whether Jaws are open or closed. Tongs are made of electric steel throughout.

Write for the "Oilwell" Tongs Folder or get a copy at any of our 90 Branch Stores

¶ **"Oilwell" Rotary Outfits, being made up of component parts. each of which is the leader in its line, is vastly superior to any other outfit.**

Oil Well Supply Co.

PITTSBURGH, U. S. A.

New York San Francisco
Los Angeles Tampico London

OILWELL SUPPLY CO

World's Largest Manufacturers of Oil Field Equipment

©CIB568922

JAN 22 1923

THE OIL WEEKLY

MEMBER AUDIT BUREAU OF CIRCULATIONS

Entered as second class mail matter at the Postoffice, Houston, Texas

Published weekly by
Gulf Publishing Company

Copyright 1923 by the Gulf Publishing Company

HOUSTON, TEXAS, SATURDAY, JANUARY 20, 1923

HOME OFFICE: Sixth Floor Goggan Bldg., Houston, Texas
R. L. DUDLEY.....Manager and Editor
W. E. GREEN.....Associate Editor
H. W. DRAPER.....Superintendent Plant
NORTH TEXAS OFFICE: 212 W. T. Waggoner Building, Fort Worth, Texas.....H. H. KING, Manager
MID-CONTINENT OFFICE: 225 Atco Building, Pho. Osage 1844, Tulsa, Okla.....J. F. CARTER, JR., Manager
EASTERN OFFICE: 1507 First National Bank Bldg., Phone Court 286, Pittsburgh, Pa.....R. E. CONNELL, Manager
WEST COAST OFFICE: 426 Douglas Building, Phone 12551, Los Angeles, Calif.....B. V. ELLZEY, Manager
CHICAGO OFFICE: 453 First National Bank Building, Chicago, Ill., Ph. Randolph 3480...O. R. WALLER, Mgr.

SUBSCRIPTION RATES
One Year.....$1.00 Single Copies.....10c
Foreign Subscription.....$2.00
Advertising rates furnished on application
Advertising accounts to be made payable to Gulf Publishing Co.

IN THIS WEEK'S ISSUE

Goes Back Many Years

On page 34 you will find how many wells were completed by years back to the year when just two were listed. You know you have wanted this information lots of times. File this number of The Blue Devil for future reference.

You Cannot Twist 'Em

Crude prices are not subject to manipulation as the curve of prices show no relation to production, consumption and stocks, so says rthur Knapp in an interesting review beginning on page 72.

Canada Not a New One

The first oil was found in the country in 1857 before Drake drilled his Pennsylvania well. Complete history of Canadian development begins on page 82.

But Here's Better News

A big well making close to 15,000 barrels light oil has been completed in untested territory up at Smackover. Now you fellows who hold close-in leases can sleep better. Page 122.

Smackover's Heavy Oil Pool

There has been lots of talk about what the heavy oil pool at Smackover in Arkansas is doing. This week The OIL WEEKLY prints a list showing every well, when completed, what it was making, and what it's making now. Page 15.

REGULAR FEATURES

	Pages
Arkansas	122
Canada	102
Central West Texas	109
Coastal Bollweevil	*
Crude Oil Markets	95-98
Editorial	13
Eastern States	124-127
Gulf Coast Field	115-118
Kansas	107
Louisiana Fields	120-121
Mexia	113
Mexico	130
Mountain States	100
New Equipment Etc	139
North Texas	112
Oklahoma	104-106
Personals	141
"Squeaks"	143
West Coast	128-129
Wildcats	131-137

KEY TO ABBREVIATIONS

Following is the explanation of abbreviations and signs used in drilling reports, completions, etc.: *—dry, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million cubic feet of gas; abn—abandoned; bbls—barrels; b. s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in—inches; lcn—location; m—milling; N. S. E. W.—North, South, East, West; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudded; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—under reaming; wo—workover; wosr—waiting on standard rig.

What Do You Know About Gravity?

Read the article by John Suman starting on page 64, and then decide yourself what the gravity of your crude is.

Mexican Exports

Mexico exported more petroleum and its products during 1922 than any year in the history of the republic. Report by months and companies on page 21.

Pipe Lines—and Maps

A two-page map of the important trunk pipe lines of the United States can be found on pages 88 and 89.

Statistics

Ask your question about oil field statistics and then turn to pages 35 to 62 and your question will be answered. If you don't believe it, try it out.

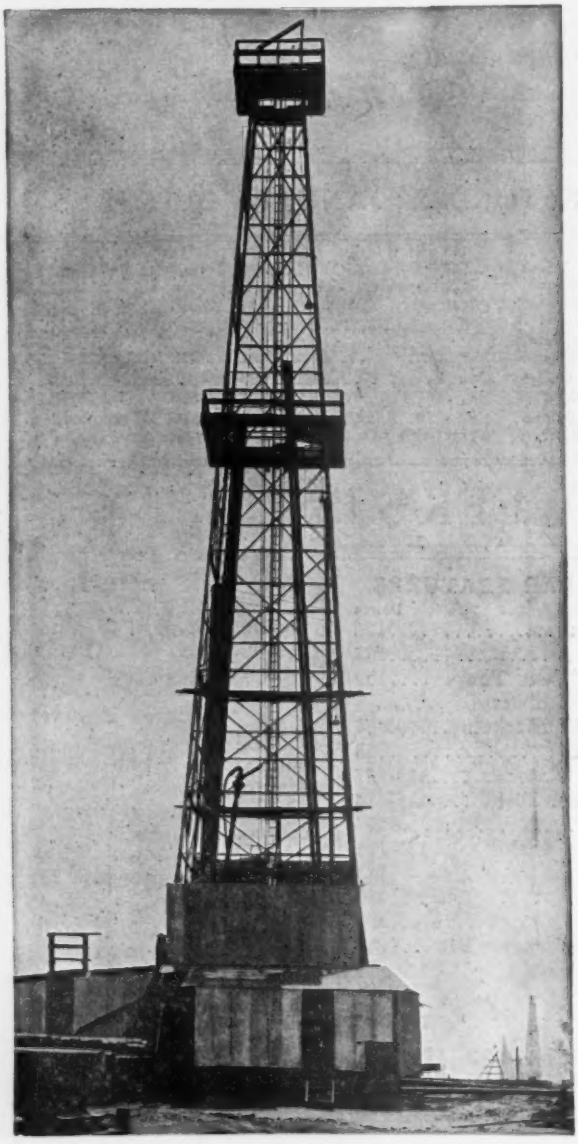
U. S. Production Is Off

Yes, the production of crude oil is off in the United States—several thousand barrels—and in the face of a 10,000 barrel increase in California. See table in market section.

Mountain States Pipe Lines

There is much interest at this time in the oil fields of the Mountain States. Hence a complete pipe line story covering that section, starting on page 90.

Dependable—International



Producers demand equipment which **has proved** dependable in cold practical tests of actual use.

Here is further proof of IDECO dependability—this 114-foot IDECO steel (galvanized) derrick in service at Santa Fe Springs, California, drilled to 4200 ft. by combination of cable and rotary and PARTED A STRING OF CALIFORNIA 10-INCH CASING.

You know—perhaps better than we can tell you— first what such a sensational performance means; the tremendous strains on the derrick, the immense power applied, the jerking, pulling, straining, the dangers of pulling in and grief in general. The IDECO **stood the test, made good,** and is in use on the job today.

The owners of this derrick—one of the largest producing companies on the coast—have shown their approval in a very practical way, having placed additional orders for IDECO equipment for use over other holes.

This is but one test—the every day field tests of actual use, month after month, all prove conclusively that IDECO derricks have those superior qualities of utmost importance in a derrick—Overstrength and Dependability.

IDECO equipment is Economical, saving thousands of dollars annually for users. You require dependable, economical equipment—your request brings details and cooperation in saving money for you.

The International Derrick and Equipment Company

Main Offices and Plant: COLUMBUS, OHIO. Export Office: 68 Beaver St., New York City

DISTRICT OFFICES AND WAREHOUSES:

Dallas, Texas
Houston, Texas
Tulsa, Okla
Oil City, La.
Los Angeles, Calif.
Shreveport, La.
Bakersfield, Calif.

Change Your Bits
Without Removing Drill Stem

Byrnes No. 2, Bethany Field, Panola County, Texas

Stokes Collapsible Bit

Bit changes made at any depth in a fractional part of the usual time and **without removing the drill stem.**

Eliminates tool joints; derrick need not be taller than necessary to operate the completed well; permits cores to be taken without removing the drill stem; effects endless other economies in time and materials.

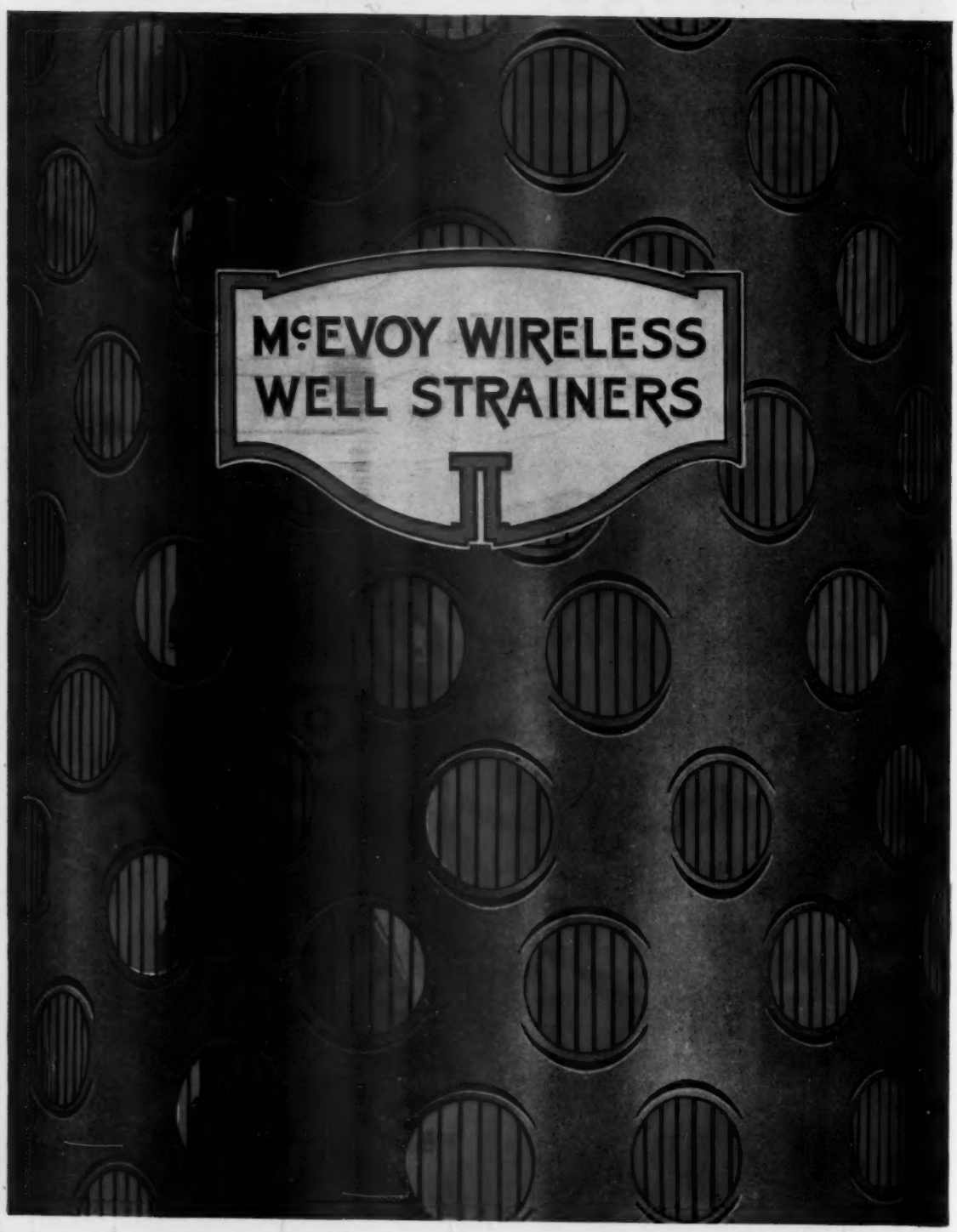
Figure it out for yourself, and then write or wire for absolute proof.

LOU L. CHILDS, President

IMPROVED ROTARY BIT COMPANY
Shreveport, Louisiana

Say you saw it in The Oil Weekly

THE McEVOY WIREL



Say you saw it in The Oil Weekly

ESS WELL STRAINER

Has the correct design to furnish a full measure of STRAINER Service—giving the producing well longer life and greater productivity.

It has the strength that assures absolute safety. You can rotate, spud, drive or sidetrack with a "McEvoy Wireless", where occasion demands, AND NOT INJURE the Brass Strainer Plugs—they are protected by the pipe.

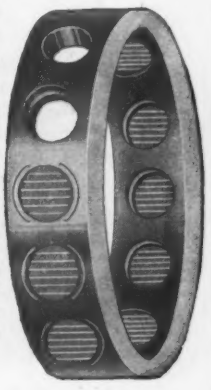
In the fields of California, the Gulf Coast and many others, McEvoy Wireless Strainers are used by the principal producing companies—McEvoy screens are fortified in their position of "Screen Service" by years of success.

Section Showing Mechanical Construction

1st—The hole is drilled in the thick pipe.—➤

2nd—The hole is reamed to 5/8" for two-thirds of its depth, leaving that heavy shoulder.➤ SEE THAT SHOULDER?

3rd—The "McEvoy Wireless" wrought-brass ➤ strainer plug is forced into the reamed hole down to that shoulder by heavy pressure, then riveted firmly in place.



Be Safe When Bringing in Those Wells—
Use a McEvoy Wireless Well Strainer

JOE McEVOY, JR., Sales Manager

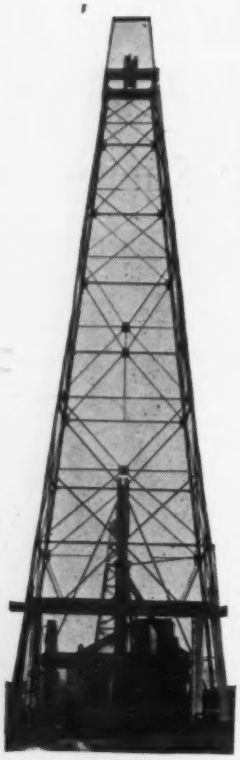
J. H. McEvoy & Co.

HOUSTON, TEXAS, U. S. A.

Pacific Coast Branch: McEvoy Wireless Strainer Co., Los Angeles, Cal.

Another Successful Field Test Brings Another Customer and a Repeat Order

They Stand the Gaff



Sizes 66 ft., 76 ft., 84 ft., 114 ft. Painted or Galvanized

TIDAL COMPANIES
TULSA, OKLAHOMA

January 13th, 1923.

Tulsa Rig Reel and Mfg. Co.,
504 Atlas Life Building,
Tulsa, Oklahoma.

Attention Mr. Walker S. Estes.

Gentlemen:

Answering your inquiry as to the test made on one of the twelve American Steel Pumping Derricks we recently purchased from you, we beg to advise that on December 20th, 1922, we started pulling on a string of 5 3/16" Cushing Special casing in Well #7 in the Drumright field, Oklahoma.

We found the casing was frozen and in an effort to loosen it we pulled 25 inches of tension in the string without injury to your derrick, which was all the pull we figured the casing would stand without parting. This operation was continuously repeated over a period of several days and the derrick seemed able to withstand a much heavier load than we placed on it. We used seven lines and did not put on your Doublers or Re-inforcing Legs for the test. We are of the opinion that this same pull would have wrecked the ordinary wooden derrick used in the Drumright field. We might add that this same test had on two previous occasions wrecked another type of steel derrick

The test was made by our Mr. Guy Mc Gowan, Field Superintendent at Drumright.

We enclose our order for another lot of twelve 74-foot American Steel Pumping Derricks.

Yours very truly,
TIDAL OIL COMPANY,
By A. F. Rose

Field tests have proven the American Steel Derrick to be the only steel pumping derrick on the market that can be reinforced in a practical manner to permit the pulling of the heaviest strings of casing.

To the American Steel Derrick used so successfully by the Tidal Oil and other Oil Companies can be added a set of our "Doublers,' or Reinforcing Legs, for extremely heavy jobs such as pulling long strings of casing, etc. These "Doublers" also permit the Operator to drill a well with a Pumper, remove the Reinforcing Legs after completion and leave the Pumper standing over the well.

We will be glad to refer you on request to Oil Companies who now are satisfied users of the American Steel Derrick.

AMERICAN STEEL DERRICKS

Manufactured by

TULSA RIG, REEL & MFG. COMPANY

804 Atlas Life Building — TULSA, OKLAHOMA — P. O. Box 2072

Branches: Avant, Barnsdall, Sperry, Skiatook, Nelagoney, Keystone, Bryant, Hominy, Pulare, Slick, Apperson, Depew, Wetumka, Tonkawa

Say you saw it in The Oil Weekly

PIONEER TANK & BOILER COMPANY

A New Name for an Old Friend

What's in a name, anyway? The refinery construction work we are doing under the name "Pioneer" is just the same high grade as when it bore the name "Tulsa Boiler and Sheet Iron."

For eighteen years, as the "Tulsa Boiler and Sheet Iron Works", we have turned out tanks and refinery steel construction that made good friends for us among the wise buyers of the Mid-Continent. We pioneered in giving these people "close to home" service on the best kind of work.

Now, under our new name, "The Pioneer Tank and Boiler Company," we're all set with the men, machinery and money to keep on growing under the Pioneer banner like we did when Tulsa Boiler and Sheet Iron was on our letterhead.

There is no change in our organization.

Get Pioneer quotations on tank and refinery construction work.

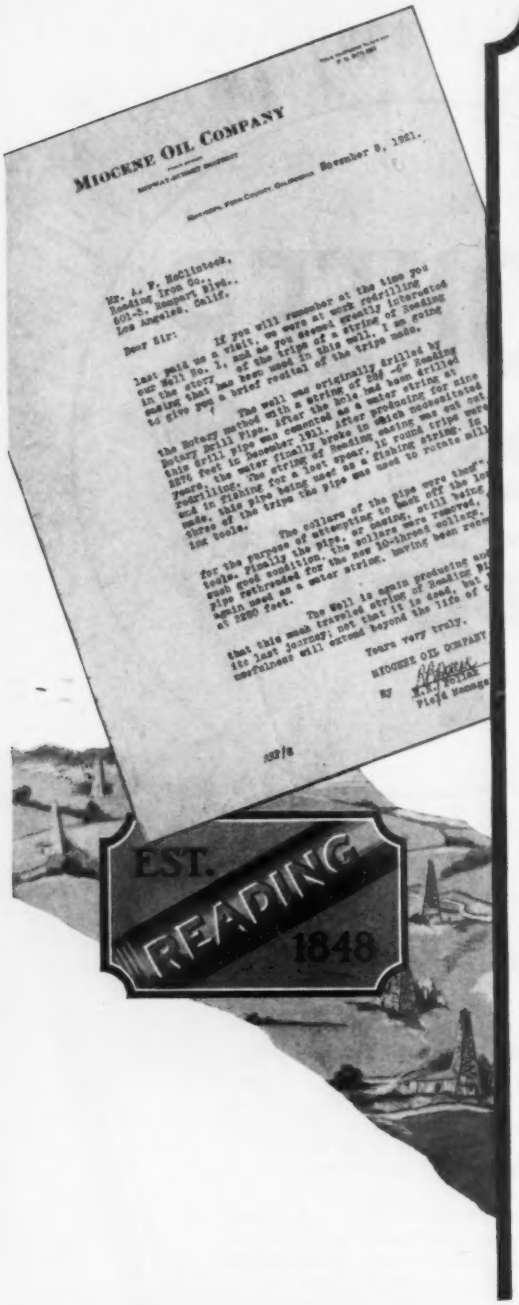
Pioneer Tank & Boiler Co.

(Formerly Tulsa Boiler & Sheet Iron Works)

BOX 1926

TULSA, OKLAHOMA

Say you saw it in The Oil Weekly



This "Much Traveled" String of "Reading" Proves the Value of Pipe that Endures

"At the time you last paid us a visit"—writes R. R. Pollak, Field Manager of the Miocene Oil Company—"you seemed greatly interested in a string of Reading Casing that has been used in our well No. 1. Here is a brief recital of the trips made.

"The well was originally drilled by the Rotary method with a string of 28-pound, 6-inch Reading Rotary Drill Pipe. After the hole had been drilled this drill pipe was cemented as a water string at 2276 feet in December 1911. After producing for nine years, the water finally broke in which necessitated redrilling. The string of Reading casing was cut out, and in fishing for a lost spear, 12 round trips were made, this pipe being used as a fishing string. In three of the trips the pipe was used to rotate milling tools.

"The collars of the pipe were then "pinned" for the purpose of attempting to back off the lost tools. Finally the pipe, or casing, still being in such good condition, the collars were removed, the pipe rethreaded for the new 10-inch collars, and again used as a water string, having been recemented at 2280 feet.

"The well is again producing and we hope that this much travelled string of Reading Pipe has taken its last journey; not that it is dead, but that its usefulness will extend beyond the life of the well."

Mr. Pollak's experience—and that of every "Reading" user—proves conclusively that low **price** pipe and low **cost** pipe are vastly different. Reading's endurance—two to three times that of steel—makes its use a positive economy

READING IRON COMPANY

Reading, Penna.

Largest Producers of Genuine Wrought Iron Pipe in the World

Oil Well Supply Co., Distributors
Stores in all important oil fields

READING
GUARANTEED GENUINE
WROUGHT IRON PIPE

INDEX TO ADVERTISERS

A

Ajax Iron Works 93
American Well and Prospecting Co..... *
Anderson, A. A 135
Atlas Supply Co.....49
American Tank Co.....57
Axelson Machine Co.....14

B

Barnickel, W. S. & Co. Inside Back Cover
Beaumont Well Works Co. 136
Bessemer Gas Engine Co.....142
Bridgeport Machine Co.....53, 132, 133, 135, 136, 137
Brownell Co., The.....127
Brown Welding Machine Co.....90
Black, Sivalls & Bryson.....27
Buckeye Traction Ditcher Co.....31
Butler Mfg. Co.....79
Boykin Machinery & Supply Co..... *

C

Caudill, S. J.....135
Chapman Valve Mfg. Co.....53
Clark Bros. Drilling Engine.....57
Clark Machine Co.....100
Columbian Steel Tank Co.....144
Continental Supply Co.....51
Connolly Agency, D. F.....105
Cosden & Co.....114
Coste, E. & Co.....135

D

Darling Valve Mfg. Co.....103
Deep Well Engineering Co.....121
De Laval Separator Co..... *
De La Vergne Machine Co.....75
Deussen, Alexander 135
Drake, C. F..... *
Dunn Manufacturing Co. 39
Dunwody Bros. Co. ..... *

E

Eichelberger, O. H.....135
Empire Refineries ..... *
Enameled Metals Co.....86
Exchange Bank of Tulsa..... *

F

Federal Supply Co.....28
First National Bank of Tulsa..... *
Fort Worth Laboratories 137
Foos Gas Engine Co.....140
Foxboro Co., Inc.....72
Franklin Valveless Engine Co.....77
Freeborn Engineering Corporation 137
Frick-Reid Supply Co.....85

G

Gantz Tank Co. 132
Gardner Governor Co.....124
Gaso Pump & Burner Mfg. Co.....108
Glen, James 137
Goodrich, B. F., Rubber Co..... *
Goulds Manufacturing Co..... *
Guiberson Corporation 41
Gulf Coast Machine & Supply Co.....117
Gulf Refining Co.....67

H

Hager, Dorsey 135
Hardway & Cathey 135
Harrisburg Pipe & Bending Co. ..... Front Cover
Heeter Sons Co., C. M., Inc.....136
Henderson, Geo. H.....137
Heitmann, F. W. & Co.....136
Heydrick Mapping Co.....137
Hill, Robert T.....135

H—Continued

Hirsch & Hannay 135
Hope Engineering Co. 102
Hough Mfg. Co., Charles N.....134
Hopkins, Edwin B.....135
Hughes Tool Co.....Back Cover, 110, 111
Humble Oil & Refining Co.....91

I

Ingersoll-Rand Co. ..... *
International Derrick & Equipment Co. 4
Interstate Pipe Co.....69
Improved Rotary Bit Co..... 5

J

Jones Oil Well Reamer.....106

K

Kelly & Jones Co. ..... *
Kansas City Structural Steel Co.....75
Kansas City Hay Press & Tractor Co.129

L

Layne & Bowler Co.....55
Lassen Hotel ..... *
Larco Wrench Mfg. Corp. 72
Ludlow Valve Mfg. Co.....143
Lucey Manufacturing Corp.....60 61
Lufkin Foundry & Machine Co..... *
Lupton, Charles T..... *

M

Maloney Tank Mfg. Co.....98
Matson, George C.....135
Moore, Lee C. & Co.....101
Mosher Steel & Machinery Co.....53
McEvoy, J. H. & Co.....6, 7
Muskogee Tool Co.....134
Myrick Machine Co. ..... *

N

National Supply Companies 45
National Transit Pump & Mch. Co.....12
Norris Bros. ..... *

O

Oil Well Supply Co...Inside Front Cover
Osage Agency ..... *
Oklahoma Tool & Supply Co..... *

P

Parkersburg Rig & Reel Co.....37
Peden Iron & Steel Co.....118
Pelican Well Tool & Supply Co.....123
Pennsylvania Tank Car Co.....126
Petroleum Rectifying Co.....116
Petroleum Safety Appliance Co.....83
Petroleum Supply Co. ..... *
Petroleum Iron Works Co..... *
Phoenix Iron Works Co.....11
Phillips, F. S.....137
Pioneer Tank Co..... 9
Powell Co., Wm. 118
Pratt & Cady ..... *

R

Reading Iron Co.....10
Reading Valve & Fitting Co..... *
Rearing Steel Casting Co.....125
Rock Map Co.....137
Rosendale Reddaway Belting & Hose Co. 99
Rotary Disc Bit Co.....119

S

Simms Oil Co. 94
Sinclair Refining Co.....130
Smith & Davidson ..... *
Southern Brass Mfg. Co.....115
Southern Engine & Pump Co.....92
Southwest General Electric Co.....87
Spang & Co. 136
Standard Oil Co. N. J..... *
Standard Seamless Tube Co.....121
Star Drilling Machine Co.....140
Stitt Ignition Co..... *
Stone, Jesse R.....135
Sullivan Machinery Co.....32
Sunshine State Oil & Ref. Co.....114
Superior Tube Co..... *
Sur, F. J. S. ..... *

T

The Texas Co.....77
Tennessee Stave & Lumber Co. ..... *
Texas Employers Ins. Assn. 113
Texas Supply Co.....136
Texas Petroleum Bureau 137
Titusville Iron Works ..... *
Trumble Gas Trap Co.....84
Tulsa Rig & Reel Co..... 8

U

Union Tool Co.....63
Union Petroleum Co..... *
United Iron Works, Inc.....71

V

Vilter Manufacturing Co.....131
Vinson, Elkins & Wood 135
Voorhees Rubber Mfg. Co.....113, 133

W

Wescott Valve Co., Inc.....23
Western Machinery Co.....138
Western Supply Co. 24
Westinghouse Electric & Mfg Co.....81
White Oil Corp..... *
Wiggins Supply Co.....136
Williams, F. N..... *
Williams, J. H. & Co..... *
Williams Tool Corp..... *
Williamsport Wire Rope Dist. Co.....43
Wilson & Willard Mfg. Co..... *
Williamsport Wire Rope Co..... *
Wyatt Metal & Boiler Works.....133

*Printed in one or more issues of each month.

PHOENIX IRON WORKS CO.
MEADVILLE, PA.

Steel Storag e

All Sizes

Stills — River Crossing Clamps — Condenser Boxes
Agitators — Special Equipment — Filters

Our 56 years experience insures Service and Quality

512 Slaughter Bldg., Dallas, Texas — 410 Mayo Bldg., Tulsa, Okla.

28,500 BARRELS IS ONE DAY'S WORK

And whether you are going to pump one day or two months, these figures hold true.

For its a pump built especially for pipe line work by people that know what pipe line work is.

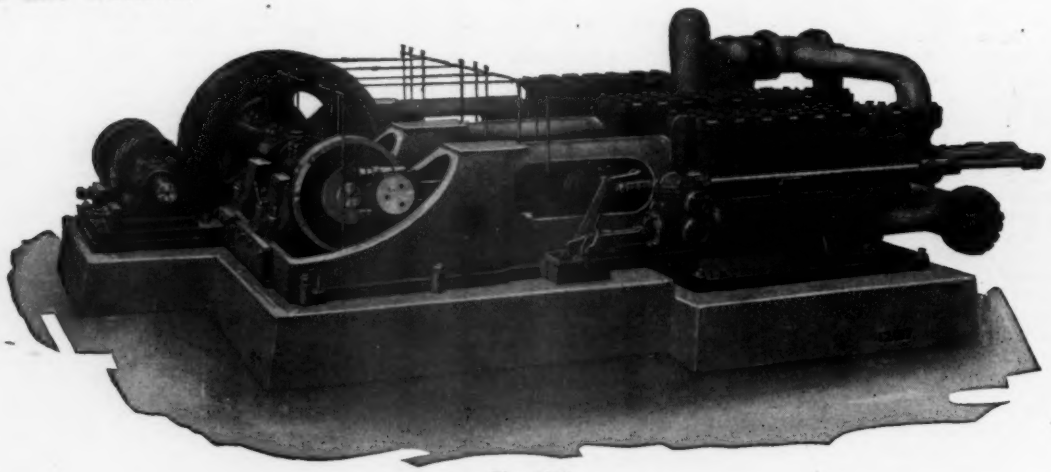


Fig. 1227

5 x 24" TRIPLEX

Ranger Type—Transit Pumps

WITH ATTACHED CIRCULATING PUMP

The squatty fluid cylinders are of cast steel—annealed, a construction we have found best adapted to pipe line work, because casting the cylinders permits fluid passages of easy turns and bends without objectionable air pockets.

This pump has BULLDOG courage and tenacity — "Courage" to bat the gauge up around 1000 pounds and the "tenacity" to keep it there day in and day out.

Your Name Will Bring Full Description With Prints

A RANGER IS ALWAYS RIGHT

NATIONAL TRANSIT
Pump & Machine Company

OIL CITY, PA.

DISTRICT OFFICES:

New York Pittsburgh Cleveland Philadelphia Kansas City Denver Houston

Say you saw it in The Oil Weekly

THE OIL WEEKLY

An International Oil Publication for Oil Producers

ESTABLISHED 1916 — MEMBER AUDIT BUREAU OF CIRCULATIONS — VOL. XXVIII—NO. 4

The Markets

THE general stiffening of oil prices throughout the past week has meant good news to the producer of oil in more ways than one. Not only does it mean more income per barrel, but it means that the market is better than he had reason to hope for at this time of the year.

In another section of this issue is an article by Arthur Knapp on "what fixes oil prices," and his conclusions, drawn in the article and substantiated by his investigations and curves, would indicate that despite the heavy production of light oils, the ratio of increasing stocks seems to be falling under the ratio of consumption.

Not only does the domestic consumer seem to be increasing his demands, due to a general picking up of industry and also probably due to the light winter, but the export demand apparently has contributed considerably.

On the other hand, viewing the production table showing the United States daily production by weeks for the past twelve months, we find that Texas light oil production on January first was down very considerably as compared to January 1st, 1922, and about 90,000 barrels less than it was on March 4. Kansas production was also under the average for the year preceding, on Jan. 1, 1923. The same thing applied to Louisiana, to Eastern States and to the light oil portions of Arkansas. But glancing at Oklahoma and the Mountain States we find a substantial gain although it is extremely doubtful if the total light oil production for this month of January will run as high as it did on the average for the year 1922, despite gains in Oklahoma and the Mountain States.

California is an empire in herself, but the effects of the condition of California's market are being felt on the Gulf Coast of Texas and Louisiana through tanker movements from the West Coast to the Atlantic Seaboard which has not hitherto felt the value of California competition.

But the country is enjoying a return to prosperity that is most evident. This prosperity is just as sure to be reflected in better oil markets as the period of depression was reflected in a bad market, provided—

There has also been a decrease in oil imports. True, at odd intervals the imports will run up to the old point, but a check of the import table printed elsewhere in this issue shows that the December average imports per week were materially lower than the average for the four months preceding.

We do not believe that the present situation justifies a wild drilling campaign. It indicates a very healthy condition, and a condition that MAY call for considerable drilling later on, but to crowd production right now might mean frightening away the new pet in the oil man's office, a price at which he can operate and make up for some of his old losses.

The OIL WEEKLY wants only such subscribers as are engaged in the oil producing or pipe line business, or subbranches of the producing and pipe line business. It has no desire for investor circulaton, and it reserves the right and will exercise the right to reject subscriptions coming from persons whose only interest in the oil industry is through the purchase of oil stock.

R. L. DUDLEY, Publisher.

Carload of AXELSON STEEL PLUNGER PUMPS
From AXELSON MACHINE COMPANY LOS ANGELES
To FRICK-REID SUPPLY CO. EL DORADO ARKANSAS

They buy 'em by the carload now

In the El Dorado oil field Axelson Pumps (working barrels) are breaking all records. Only a few months ago we shipped the first pump to that district. Since then orders have been coming faster and faster. Now it's necessary to ship by the carload. This same success is being met with in many other districts.

Axelson Pumps have successfully overcome the most difficult pumping problems in the Mid-Continent and California fields.

You're passing up a mint of profit when you fail to use Axelson Pumps (Working Barrels) and Sucker Rods.

AXELSON SUCKER RODS

You'll have fewer pulling jobs with these rods. They keep the oil coming fast.

Correspondence from Foreign Oil Producers Solicited

Axelson Machine Co.

General Offices and Western Factory:
Box 316, Los Angeles, Calif.
Mid-Continent Office: 520 Kennedy Bldg., Tulsa, Okla.
Mid-Continent Sales Representatives, Frick-Reid.

THERE IS NO ECONOMICAL SUBSTITUTE FOR QUALITY

Axelson Pumps

49 Smackover Wells Are Not Producing

Some of them are dead, others shut in and many going on pump in heavy oil area

Houston, Texas, Jan. 17.—As of January 9, there were 49 wells in the heavy oil Smackover pool not producing. Some of them are dead, others are shut in for storage or pipe line facilities and still others shut down waiting for standard rig.

The accompanying record lists 196 completions in the heavy oil area, giving date of first production, well number, location, total depth, initial production and production at the time the record was compiled. Of the total completions, 18 were gassers, four salt water wells, one junked hole and 173 producers of oil.

The total initial production of the 173 producers was 321,225 barrels.

On the date the record was prepared, only 125 wells were producing, the output being 91,985 barrels. According to reports reaching Houston late last week, the production had reached even a lower figure on one day, although the average for the week was above 90,000 barrels a day.

The old familiar "put put" of the gas engines at the pumping wells is a familiar sound at Smackover now. More engines will be at work from day to day. It will be noted from the list that several of the wells which came in with a small production of oil and considerable gas are now increasing their oil production and some of the small wells are on the pump making more oil than the initial.

The list of heavy oil area completions follows:

Company—	Well	sec., tsp., rg.	T. Dp.	Date Comp.	I. P.	P. P.
Arkansas Natural Gas Company	B. T. Laney 1	31-15-15	2022	10-22-22	3,000	2000
Arkansas Natural Gas Company	B. T. Laney 2	31-15-15	2039	10-29-22	4000	225
Arkansas Natural Gas Company	B. T. Laney 3	31-15-15	2033	10-27-22	200	150
Arkansas Natural Gas Company	B. T. Laney 4	31-15-15	2049	11- 7-22	1000	475
Arkansas Natural Gas Company	Spaha 1	35-15-16	2021	1- 4-23	¶1	¶1
Arkansas Natural Gas Company	Spaha 2	35-15-16	2017		¶15	¶15
Amerada Petroleum Corporation	McKenzie 1	36-15-16	2060		50	...
Arkansas Chief Oil Company	McKenzie 1	36-15-16	2016	11-22-22	1000	...
Arkansas Chief Oil Company	McKenzie 2	36-15-16	2011	12-19-22	1000	...
Arkansas Chief Oil Company	McKenzie 3	36-15-16	2010	12-13-22	1200	...
Arkansas Maricopa Oil Company	Lewis 1	35-15-16	2002	11-23-22	¶2	...
Baker Trustee	Usrey 1	36-15-15	2500	12- 2-22	sw	...
Baker et al	Murphy 1	28-16-15	2024	12- 6-22	sw	...
Bailey et al	Goodwin 1	32-15-15	2045	12- 3-22	1000	500
Bradstreet Oil Company	Laney 1	36-15-16	2001	1- 4-23	300	240
Bradstreet Oil Company	Laney 2	36-15-16	2017	1- 3-23	300	260
Bradstreet Oil Company	Poole 1	25-15-16	2024	11- 4-22	4000	990
Bradstreet Oil Company	Poole 2	25-15-16	2021	12- 9-22	6000	1010
Bradstreet Oil Company	Poole A-1	25-15-16	2017	12-28-22	200	200
Blue Grass Syndicate	Primm 1	1-16-16	2050	12-15-22	15	...
Crawford & Sebastian	Giller 1	14-16-15	1975	9- 1-22	15	...
Dean & Baker	Laney 1	30-15-15	2032	11- 3-22	500	...
Duho Oil Company	Laney 2	31-15-15	2048	11- 1-22	1500	Shut in
Duho Oil Company	Laney 3	31-15-15	2040	11- 3-22	1200	Shut in
Duho Oil Company	Laney 4	31-15-15	2046	11-22-22	150	...
Duho Oil Company	McKenzie 2	36-15-16	2048	11- 5-22	500	...
Duho Oil Company	McKenzie 3	36-15-16	2014	11-21-22	200	...
Duho Oil Company	McKenzie 5	36-15-16	2022	1- 4-23	400	300
Duho Oil Company	McKenzie 8	36-15-16	2026	1- 3-23	100	100
Duho Oil Company	McKenzie 7	35-15-16	2012	12-27-22	100	75
El Dorado Natural Gas Company	Murphy 1	17-16-15	2044		¶70	
Edmonds Syndicate	McKenzie 1	36-15-16	2000		4,000	1500
Edmonds Syndicate	Umstead 1	2-16-16	2049	12-15-22	¶5	...
Empire Gas & Fuel Company	Bradley 1	30-15-15	2052	11-19-22	300	200
Empire Gas & Fuel Company	F. A. Laney 1	31-15-15	2012	12-19-22	5,000	2700
Empire Gas & Fuel Company	F. A. Laney 2	31-15-15	2015	1- 3-23	225	200
Empire Gas & Fuel Company	F. A. Laney 4	31-15-15	2010	1- 3-22	3,000	...
Empire Gas & Fuel Company	B. F. Laney A-1	36-15-16	2006	12-14-22	5,000	1000
Empire Gas & Fuel Company	Linahan 1	36-15-16	2020	1- 6-23	20	...
Empire Gas & Fuel Company	H. McKenzie 1	36-15-16	2039	11-28-22	200	...
Forrest Oil Company	Goodwin 1	29-15-15	2033	12- 1-22	900	1000
Forrest Oil Company	Goodwin 2	29-15-15	2040	12- 5-22	250	800
Forrest Oil Company	Goodwin 4	29-15-15	2020	12-31-22	1,500	700
Forrest Oil Company	Lewis 1	36-15-16	2009	11 -1-22	¶25-400	1450
Forrest Oil Company	Lewis 2	36-15-16	2023	12 -8-22	2,000	1500
Forrest Oil Company	Lewis B-1	26-15-16	2066	12-23-22	500	100
Ganzel et al	Leverett 1	11-16-16	2075	12-13-22	¶35	...
Gladys Belle Oil Company	Duke 1	16-16-15	2077	12-13-22	¶25-75	...
George & Jones Drilling Company	Umstead 1	4-16-15	1964	9-30-22	¶30	...

Company—	Well	sec., tsp., rg.	T. Dp.	Date Comp.	I. P.	P. P.
Gulf Refining Company	Alphin 1	2-16-15	1975	8-12-22	¶15-20	15
Gulf Refining Company	Forch 1	29-15-15	2049	12-24-22	150	60
Gulf Refining Company	Goodwin 1	32-15-15	2030	12-23-22	¶35	...
Gulf Refining Company	Johnson 1	29-15-15	2012	11 -1-22	1,100	425
Gulf Refining Company	Johnson 2	29-15-15	2020	11-12-22	1,000	475
Gulf Refining Company	Johnson 3	29-15-15	2009	11-13-22	¶25-150	450
Gulf Refining Company	Goodwin 4	29-15-15	2040	11-21-22	10,000	1500
Gulf Refining Company	Primm 1	1-16-16	2000	12-12-22	1,000	Dead
Gulf Refining Company	Primm 2	1-16-16	2000	1 -3-23	¶30-20	Dead
Gulf Refining Company	Umstead 1	32-15-15	2019	12 -1-22	6,000	675
Gulf Refining Company	Umstead 2	32-15-15	2023	12-11-22	¶10-250	500
Gulf Refining Company	Umstead 3	32-15-15	2015	11-28-22	¶10-1000	550
Gulf Refining Company	Umstead 4	32-15-15	2015	12-24-22	¶23-200	310
Gulf Refining Company	James 1	6-16-15	1916	12-19-22	4,800	3000
Harris Drilling Company	Spahr 1	35-15-16	2024		¶6	...
Hildreth et al	Berg 1	20-15-15	2132	11-11-22	s. w.	...
Hirsch Trustee	Fee 1	25-15-16	2049	11-21-22	1,000	425
Houston Oil Company	Cunningham 1	25-15-16	2052	12 -1-22	400	165
Houston Oil Company	Laney 1	31-15-15	2009	12-12-22	8,000	2000
Houston Oil Company	Laney 2	31-15-15	2025	12 -9-22	600	500
Houston Oil Company	Laney 3	31-15-15	2009	12-14-22	5,000	4050
Houston Oil Company	Laney 4	31-15-15	2006	1 -4-23	5,000	3750
Houston Oil Company	Murphy 1	28-15-15	2051	10-31-22	200	160
Houston Oil Company	Primm 1	1-16-16	2017	12-24-22	¶15-20	1100
Houston Oil Company	Primm 3	1-16-16	2027	1 -8-23	¶3-100	100
Humble Oil & Refining Company	Arnold 1	25-15-16	2056	11-23-22	800	50
Humble Oil & Refining Company	Berg A-1	30-15-15	2063	12-28-22	5,000	1500
Humble Oil & Refining Company	Berg B-1	31-15-15	2050	12 -7-22	50	100
Humble Oil & Refining Company	Flenniken 1	6-16-15	2005	1 -2-23	5,000	100
Humble Oil & Refining Company	Hirsch 1	25-15-16	2027	11-12-22	120	100
Humble Oil & Refining Company	Graves 1	28-15-15	2040	11 -9-22	¶50-300	300
Humble Oil & Refining Company	Graves 2	28-15-15	2057	12-17-22	5,000	1200
Humble Oil & Refining Company	Graves 3	28-15-15	2062	12-28-22	500	150
Humble Oil & Refining Company	Laney 1	31-15-15	2056	12 -8-22	1,000	700
Humble Oil & Refining Company	Laney 2	31-15-15	2025	1 -3-23	¶15-25	¶15-25
Humble Oil & Refining Company	H. Laney 1	31-15-15	2035	12 -6-22	9,000	1120
Humble Oil & Refining Company	H. Laney 2	31-15-15	2025	1 -4-23	2,500	2000
Humble Oil & Refining Company	Primm 1	1-16-16	2018	12-28-22	¶15-	...
Hunt et al	Parkinson 1	1-16-16	2006	12-20-22	5,000	2500
Imperial Oil Company	McLanahan 1	6-16-15	2025	12-30-22	7,000	6000
E. M. Jones	B. T. Laney 1	31-15-16	2021	10-13-22	5,000	1000
E. M. Jones	Cook 1	16-16-15	2034		¶62	...
McDuff-Greenwood	Houston 1	12-16-16	2077	9-11-22	¶30-3	
McMurry et al	Hirsch 1	35-15-16	2050	12-20-22	50	
McMurry et al	Laney 1	36-15-16	2012	10-26-22	4,000	
McMurry et al	Laney 1	31-15-15	2038	12-19-22	¶2-50	
McPhail et al	Laney 1	31-15-15	2040	12-17-22	50	s. i.
McAdoo Oil Company	Metrick 1	36-15-16	2027	12-26-22	¶5-25	
Marr, Pat	Primm 1	2-16-16	1999	1- 8-23	¶1	
Marr, Pat	LeCroy 1	35-15-16	1987	1- 1-23	8,000	
Marr & Morris	Laney 2	31-15-15	2020	11-16-22	7,000	
Morris Drilling Company	Laney 1	31-15-15	2049	11- 7-22	4,000	500
Morris Drilling Company	Laney 1	31-15-15	2026	1- 4-23	200	610
Newton Trustee	Poole 1	25-15-16	2041	10-22-22	¶5-10	
Newton Trustee	Poole 2	25-15-16	2032	12-23-22	40	
Oil Operators Trust	Murphy 1	8-16-16	2023	7-10-22	¶50	
Olvey et al	McDonald 1	1-16-16	1979	10-30-22	7,000	s. i.
Olvey et al	McDonald 2	1-16-16	2000	12- 2-22	6,000	s. i.
Olvey et al	McDonald 3	1-16-16	2002	12-19-22	3,000	
Olvey et al	McDonald 4	1-16-16	2052	12-20-22	6,000	
Olvey et al	Umstead 1	30-15-15	1895	9-25-22	¶15	
Pure Oil Company	Briston 1	28-15-15	2057	12-24-22	2,000	1775
Pure Oil Company	Briston 2	28-15-15	2062	12-24-22	1,500	1825
Ramage et al	James 1	6-16-15	1992	12-29-22	5,000	3000
Reynolds et al	Poole 1	20-15-15	2176	12-11-22	s. w.	
Roxana Petroleum Corporation	Bennett 1	32-15-15	2012	12-18-22	7,000	900
Roxana Petroleum Corporation	Bennett 2	32-15-15	2009	12-23-22	5,000	1000
Roxana Petroleum Corporation	Laney 1	31-15-15	2030	12-29-22	1,500	500
Roxana Petroleum Corporation	Murphy 1	28-15-15	2056	10-28-22	360	800
Roxana Petroleum Corporation	Murphy 2	28-15-15	2056	10-31-22	4,000	1000
Roxana Petroleum Corporation	Murphy 3	28-15-15	2047	12- 7-22	180	600
Scroggins et al	McKenzie 1	36-15-16	1996	11-12-22	¶15-40	2500
Skinner et al	Berg 1	32-15-15	2015	12-11-22	¶10-10	15
Simmonds et al	Rogers 1	2-16-16	2056	12-22-22	¶3	
Stachan & Robertson	Parkinson 1	1-16-16	1996	12-17-22	¶20	s. i.
Sinclair Oil Company	Laney 1	30-15-15	2015	12- 8-22	75	60
Sinclair Oil Company	Linahan 1	36-15-16	1990	11-13-22	8,000	500

Company—	Well	sec., tsp., rg.	T. Dp.	Date Comp.	I. P.	P. P.
Sinclair Oil Company	Linahan 2	36-15-16	1996	12-22-22	1,000	1000
Sinclair Oil Company	Linahan 4	36-15-16	1997	12-20-22	2,000	1000
Sinclair Oil Company	McKenzie 1	36-15-16	1998	1- 6-23	¶10-400	
Sun Company	Johnson 1	30-15-15	2036	11-22-22	1,200	1000
Sinclair Oil Company	Laney 1	31-15-15	2000	12-28-22	500	500
Simms Oil Company	Goodwin 1	29-15-15	2038	11-21-22	125	100
Simms Oil Company	Goodwin 2	29-15-15	2050	11-28-22	2,000	100
Simms Oil Company	Goodwin 3	29-15-15	2036	11-25-22	2,000	150
Simms Oil Company	Goodwin 4	29-15-15	2050	12-15-22	800	150
Simms Oil Company	Hirsch 1	31-15-15	2035	10-28-22	7,000	1600
Simms Oil Company	Hirsch 4	31-15-15	2042	12-14-22	2,000	1625
Simms Oil Company	B. S. Laney 1	31-15-15	2042	11-29-22	1,500	100
Simms Oil Company	B. S. Laney 2	31-15-15	2048	11-10-22	2,000	300
Simms Oil Company	F. A. Laney 1	31-15-15	2035	11- 1-22	2,500	wosr
Simms Oil Company	F. A. Laney 2	13-15-15	2053	11-10-22	1,400	wosr
Simms Oil Company	F. A. Laney 3	31-15-15	2055	12-18-22	15	wosr
Simms Oil Company	Laney A-1	30-15-15	2037	12-11-22	70	30
Simms Oil Company	Laney B-1	31-15-15	2015	12-22-22	2,000	wosr
Simms Oil Company	Laney B-2	31-15-15	2017	1- 6-23	100	100
Simms Oil Company	Laney C-1	31-15-15	2021	11- 8-22	2,000	dead
Simms Oil Company	Laney C-2	31-15-15	2042	12- 1-22	250	dead
Simms Oil Company	Laney D-1	30-15-15	2035	12-10-22	100	35
Simms Oil Company	McKenzie 1	36-15-16	2000	1- 5-23	25	wosr
Simms Oil Company	McKenzie 2	36-15-16	2121	11-24-22	200	wosr
Simms Oil Company	McKenzie 3	36-15-16	2025	11-28-22	5,000	wosr
Simms Oil Company	McKenzie 4	36-15-16	2025	11-20-22	6,000	wosr
Simms Oil Company	McKenzie A-1	36-15-16	2045	11-13-22	200	50
Simms Oil Company	McKenzie A-2	36-15-16	2025	12-29-22	150	100
Simms Oil Company	McKenzie A-3	36-15-15	2024	11-16-22	500	100
Simms Oil Company	McKenzie A-4	36-15-16	2025	11-14-22	200	150
Simms Oil Company	T. Murphy 1	29-15-15	2054	10-26-22	2,000	85
Simms Oil Company	T. Murphy 2	29-15-15	2076	11-14-22	2,000	100
Simms Oil Company	T. Murphy 3	29-15-15	2059	12- 7-22	50	115
Simms Oil Company	T. Murphy 4	29-15-15	2066	12-30-22	150	130
Simms Oil Company	N. B. Murphy 1	29-15-15	2057	11-15-22	60	60
Simms Oil Company	J. E. Murphy 1	28-15-15	2041	12-30-22	4,000	1500
Simms Oil Company	J. E. Murphy 2	28-15-15	2038	9-13-22	4,000	2205
Simms Oil Company	J. E. Murphy 3	28-15-15	2042	10-20-22	3,000	350
Simms Oil Company	J. E. Murphy 4	28-15-15	2053	12- 8-22	300	495
Simms Oil Company	Reynolds 1	32-15-15	1957	9-10-22	¶10	
Standard Oil Company	Forch 2	29-15-15	2039	1- 7-23	3,000	
Standard Oil Company	Forch 3	29-15-15	2035	12-28-22	150	125
Standard Oil Company	Forch 4	29-15-15	2018	12-21-22	250	140
Standard Oil Company	Bennet A-1	32-15-15	1983	1- 7-23	500	
Standard Oil Company	Johnson 1	29-15-15	2005	11-21-22	2,500	710
Standard Oil Company	Johnson 4	29-15-15	2025	11-27-22	3,000	765
Standard Oil Company	Murphy B-1	29-15-15	2043	9- 9-22		295
Standard Oil Company	Murphy B-2	29-15-15	2047	10-13-22	180	310
Standard Oil Company	Murphy B-3	29-15-15	2043	11- 1-22	2,500	325
Standard Oil Company	Murphy B-4	29-15-15	2031	10-31-22	1,500	305
Standard Oil Company	Murphy B-5	29-15-15	2010	11- 9-22	3,000	310
Standard Oil Company	Murphy B-6	28-15-15	2051	12- 5-22	600	300
Standard Oil Company	Umstead 1	32-15-15	2007	12- 5-22	200	120
Standard Oil Company	Umstead B-1	32-15-15	2032	1- 3-23	¶40-5	85
Texas & Pacific Coal & Oil Company	Laney 1	31-15-15	2048	11-11-22	700	500
Texas & Pacific Coal & Oil Company	Laney 2	31-15-15	2049	11-28-22	800	500
Thompson et al	Arnold 1	24-15-16	2532	10-10-22	Junked	
Thompson et al	McDonald 1	1-16-16	2005	12-21-22	200	
Tomlinson Oil Company	Laney 1	31-15-15	2060	11- 9-22	2,000	
Tomlinson Oil Company	Laney 2	31-15-15	2051	12-14-22	100	
The Texas Company	Berry 1	33-15-15	2043	12-12-22	¶35	
The Texas Company	McKenzie 1	36-15-16	2033	12- 5-22	1,500	1000
The Texas Company	McKenzie 2	36-15-16	2030	11-26-22	5,000	1000
Vitex Oil Company	Linihan 1	36-15-16	2029	12-19-22	1,500	400
V. K. F. Drilling Company	Richardson 1	29-15-15	2066	7-31-22	300	600
V. K. F. Drilling Company	Richardson 2	29-15-15	2068	10-11-22	1,200	900
V. K. F. Drilling Company	Richardson 3	29-15-15	2066	11-10-22	1,000	1000
Woodley Petroleum Company	Richardson 1,	29-15-15	2063	10-20-22	5,000	250
Woodley Petroleum Company	Richardson 2	29-15-15	2080	11-17-22	2,000	100
Woodley Petroleum Company	Richardson 3	29-15-15	2089	12-13-22	50	150

Explanation of abbreviations—s. i., shut in. ¶number of millions of cubic feet of gas; s. w., salt water; wosr, waiting on standard rig; I. P., initial production; P. P., present production.

John L. Gray, president of the Barnsdall Refining Company; George D. Locke, vice president, both of Chicago; E. B. Reeser and F. H. Minard, vice presidents of the Barnsdall corporation, both of New York, were visitors in Tulsa last week, remaining several days to inspect properties of the companies and to gather facts on conditions in the Mid-Continent field.

W. L. Connelly, who is directing activity of the Mammoth Oil Company at Teapot Dome, was in Tulsa last week, en route to Houston, his old home. He is on an extended vacation and intends to spend several weeks touring Gulf water, visiting Mexico and the West Indies.

Sinclair Says Nothing About Teapot Dome

Official called before Investigating Committee but only gives statistics

Washington, D. C., Jan. 16.—Harry F. Sinclair, of the Sinclair Consolidated Oil Company, appeared before the committee on Tuesday and Wednesday to discuss the operations of his corporation in the oil industry. He told of joint ownership in the Sinclair Pipe Line Company and the Sinclair Crude Oil Purchasing Company, with the Standard Oil Company of Indiana and he furnished the senators with a list of the principal stockholders in the consolidated company. This opening testimony produced only statistics but it is anticipated that he will give details of the Tea Pot Dome operations before concluding his remarks. P. A. Wiley, secretary of the Broadview Oil Company of Wichita Kansas, charged the big companies with an attempt to corner the independents through the price fluctuations that occurred in 1920 and 1921.

A. B. Butler, Jr., vice president of the National Oil & Development Company of Oklahoma City declared that he and other small producers in the Walters field territory were compelled to enter into a contract with the Magnolia Petroleum Company for the storage of 50 per cent of their output when the latter refused to continue tanking full runs. The storage cost was two cents per barrel per month and some months later the Magnolia company took advantage of the option it held to purchase the oil, paying the then market price of one dollar per barrel. The price had been 75 per barrel.

He figured he lost nearly $25,000 dollars through this act of the big company, he said he had the alternative of disposing of the oil to others within a 30 day period but could find no outlet in such a short time.

Mr. Irish was questioned by Attorney Gilbert E. Roe as to the prices of gasoline from the Pennsylvania refineries as compared with the prices of the Standard Oil Company of Ohio in the Pennsylvania territory. Mr. Roe pointed out that the tank wagon prices of the latter were much lower. On June 30, 1922, motor gasoline was sold by the Ohio Company for 23 cents per gallon, while on May 12, the nearest date for which Mr. Roe had figures, the Atlantic Refining Company demanded 26 cents. On other dates the prices charged by each showed a difference of two and three cents, with the Standard Oil Company the lower. When the Pennsylvania Company was asking 14 cents per gallon for kerosene, the Ohio Company was one cent lower.

The Committee's attorney declared that it could hardly be claimed that from the location of the Atlantic Refining Company's plant that added freight rates would account for the difference in the prices in view of the fact that the Standard Oil Company of Ohio was serving practically the same territory. The witness stated that he would make the general observation that petroleum products can not stand any appreciable difference in freight rates—that is to say, they can not pay freight charges on crude oil from the west and then the additional local carriage and compete with local Ohio prices.

In response to Mr. Roe's inquiry as to the method of transporting oil from the producing fields to the refineries, Mr. Irish stated that in 1920 about 150,000 barrels came by tank cars, but that nothing came by railroad from that time until June , 1922. The trend of the questioning was toward bringing out a showing that transportation costs were not so great a factor in the determination of competitive prices. The witness declared that the pipe line rates differ with distance and that his company has to pay higher charges than the Standard Oil Company of Ohio for transportation.

Mr. Irish, in response to further questioning as to prices, furnished figures showing that the tank wagon prices on given dates were three cents under the open-market (retail or service station) prices. His company sells from the Pittsburg refinery to jobbers, dealers and consumers. The jobbers buy in large lots and the prices to them are usually lower than the prices to other dealers, he said.

Shipments of oil by boat are considerable, the witness stated, and since the dissolution of the Standard Oil Companies they have been growing. In 1920 the shipment of crude petroleum by water represented 40 per cent of the receipts by this company. This figure was increased to 51½ per cent in 1921 and to 62.7 per cent in 1922. The Mexican crude comes to it from the Mexican ports of Tampico and Lobos and from the Texan ports of Texas City and Port Arthur. The Mexican imports were 5,600,000 barrels in 1920, 6,900,000 barrels in 1921, and 5,600,000 barrels in 1922.

The Mexican crudes come from two fields; the light oils from Vera Cruz and the heavy oils from the Pamuca fields. The imports for the three years were divided as follows: 1920, heavy, 769,000, and light 5,864,000; 1921, heavy, 1,083,000, and light, 5,862,000; 1922, heavy, 2,569,000 and light, 3.088,000 barrels. River transportation is arranged for by the Pamuca-Boston Oil Company. The Pamuca

Texas Wins and Loses in Supreme Court Boundary Line Decision

Washington, Jan. 15.—The present cut bank of Red River is the northern boundary of Texas, according to the holding of the United States supreme court in a divided opinion today deciding the final issue in the Oklahoma-Texas boundary litigation, which is accepted as being a substantial victory for the federal government. Says Mark Goodwin in Galveston News Dispatch. Texas loses to the government ownership of the major portion of the valuable oil and gas area over which two sovereignties, with Oklahoma as a third, have been at law since early in 1920. By the decision of the court the high bluffs on the south as contended for by the federal government, do not constitute the boundary. All of the valley land south of the cut bank belongs to Texas. Burk-Bet and Goat islands were awarded to the government. The island opposite mile post 575, near the line between Hardeman and Wilbarger counties, was awarded to Texas.

For a Few Minutes of Your Time We'll Give You—

READ THE LETTER

Last August when The Oil Weekly announced that thereafter it would be an oil producer's journal, devoted primarily to the oil producer and the pipe line man, it took a radical step in oil journalism.

Its judgment in specializing to this particular branch has been vindicated fully. Its paid circulation among oil producers has grown to the point where it has more oil producer circulation than any other two oil journals combined. This statement is based upon the circulation reports we have on other oil journals and our own circulation statement which is now available for distribution to advertisers. This means that The Oil Weekly has enlarged its usefulness.

Our plans for the coming year embrace sincere efforts to make The Oil Weekly of more value to the oil business. It means more "prospective subscribers" must be added to our lists.

For each list of 15 names and addresses sent in by Oil Weekly subscribers, we will send that subscriber a copy of this edition, with a special binding, with his name on the cover in gold letters. If you are not a subscriber, send in your subscription with the list and we'll send you this special number with your name in gold letters.

By sending in such lists you not only will receive this special copy, but will help increase the scope and usefulness of The Oil Weekly and our ability to give you a better journal, week by week.

Thank you,

R. L. Dudley

Editor.

The OIL WEEKLY,

Houston, Texas.

Gentlemen:—

Below you will find names and addresses of men engaged in the oil producing or pipe line business who would probably be interested in The OIL WEEKLY:

NAME	ADDRESS	OCCUPATION

Yours truly,

_____

Address _____

187,000,000 Mexican Oil Exported in 1922

Huasteca led with more than 39,000,000 barrels—Aguila second with 22,000,000

Tampico, Jan. 13.—Mexico exported a total of 187,019,781 barrels of petroleum and its products during the year 1922, against 181,942,578 barrels in 1921 and 154,471,802 barrels in 1920.

The banner month of the year, in exports, was May, when 18,588,745 barrels was shipped out from the Tampico section. January last year was the next point of total exports, falling only about 200,000 barrels. During November the smallest amount of oil was shipped out, the total for that month being 12,085,397.

The Huasteca was a consistent leader in amount of oil shipped out during the entire year, ending the year with a total of 39,400,914 barrels exported. The Aguila came second with 22,000,000 barrels, and the Carona was third with 20,102,000 barrels.

The accompanying tables show the exports by companies by months for the year.

Company	December	November	October	September	August	July	June	May	April	March
Huasteca	3,660,340	3,707,115	3,358,320	3,114,100	3,510,330	3,514,655	3,195,855	3,245,190	3,017,920	2,969,905
Transcontinental	751,590	654,323	439,130	596,010	560,570	1,077,860	1,532,050	1,903,715	2,077,230	2,878,940
Aguila	1,791,870	1,287,563	1,489,935	1,203,260	1,628,210	1,884,075	2,325,430	2,195,390	2,453,925	1,697,565
International	328,765	530,314	465,890	535,770	1,057,345	1,858,590	1,452,355	1,802,695	1,441,570	1,550,285
Corona	1,991,335	1,732,006	1,979,495	1,285,880	1,665,085	1,626,640	2,019,055	1,843,105	2,005,500	1,429,170
Mexican Gulf	753,460	880,866	1,972,750	840,525	1,196,800	1,670,570	1,156,195	1,874,325	1,959,220	1,386,890
Agwi	363,365	515,511	433,470	700,980	650,900	560,045	411,200	880,905	1,242,930	941,045
Freeport	509,960	458,837	716,035	770,355	699,285	752,505	757,670	573,270	1,079,230	862,785
Texas	704,525	600,736	834,965	785,865	690,055	909,955	982,705	931,945	666,165	731,150
Cortez	162,090	239,660	311,590	159,730	170,555	773,590	911,370	997,040	377,575	680,445
National Oil	.....	.....	.....	.....	.....	.....	.....	.....	155,410	443,965
East Coast	524,440	352,347	335,490	265,165	396,580	525,930	382,500	358,695	430,730	414,510
New England	88,360	267,543	301,230	61,210	174,740	324,655	375,015	486,175	287,860	408,115
Penn Mex.	.....	.....	192,445	.....	.....	627,895	757,760	595,800	265,900	190,075
Pierce	18,385	39,094	.....	155,200	94,550	261,820	46,270	26,075	66,160	181,680
Nat. Petroleum	150,330	225,665	100,660	129,450	259,000	174,065	73,055	135,610	186,935	146,425
Island	239,210	133,189	306,200	141,335	236,395	313,815	206,605	499,850	72,195	136,290
Continental Mex.	.....	.....	116,745	123,020	449,955	141,480	69,415	92,555	65,055	123,330
U. S. Mex.	41,890	36,557	48,765	.....	109,230	50,230	50,115	95,900	100,790	51,325
Interocean	46,615	53,671	63,000	52,480	57,870	.....	101,150	50,505	50,220	50,165
Swiftsure	.....	159,319	347,010	283,750	334,390	48,820	.....	.....	.....	.....
Tal Vez	.....	.....	.....	.....	53,915	60,620	121,095	.....	.....	.....
Panuco-Boston	203,205	211,081	175,935	162,670	.....	.....	.....	.....	60,860	.....
Cosmos	.....	.....	.....	.....	.....	.....	37,615	.....	.....	.....
Total	12,698,935	12,085,397	13,989,060	11,366,755	13,948,850	17,157,815	16,964,480	18,588,745	18,063,380	17,274,060

crude is shipped to Philadelphia and to Brunswick, Ga. The Pamuca-Boston Oil Company is the only subsidiary of the Atlantic Refining Company doing business in Mexico.

On May 22, 1922, the holders of more than one per cent of the stock of the Atlantic Refining Company were Anna M. Harkness, 2.9 per cent; Edward S. Harkness, 3.09 per cent; Estate of W. L. Harkness, 1.42 per cent; W. H. Houston estate, 1.19 per cent; Clifford M. Leonard, 1.7 per cent; Northern Finance Corporation, 4.07 per cent; J. D. Rockefeller, Jr., 24.85 per cent, and the Pratt interests, 4.8 per cent.

The witness testified that Mr. Rockefeller holds 12,473 shares out of a total of 50,000 shares and declared that his holdings are voted by the board of directors without any special consultation with Mr. Rockefeller. This assertion was of great interest to the probers and the question was gone into at some length.

	February	January	Total for year
Huasteca	2,550,840	3,556,344	39,400,914
Transcontinental	3,052,550	3,499,428	19,023,396
Aguila	1,932,230	2,110,551	22,000,004
International	1,887,320	1,655,147	14,566,046
Corona	1,355,730	1,169,289	20,102,290
Mexican Gulf	1,423,585	1,533,784	16,630,970
Agwi	473,505	622,820	7,796,676
Freeport	1,062,880	688,287	8,931,099
Texas	1,116,790	977,723	9,932,579
Cortez	1,845	372,306	5,157,796
National Oil	140,030	152,789	448,229
East Coast	472,695	341,923	4,801,005
New England	302,730	418,469	3,496,102
Penn Mex.	188,340	75,858	2,894,073
Pierce	111,960	115,685	1,117,079
National Petroleum	95,800	105,945	1,782,940
Island	378,025	755,752	3,418,861
Continental Mex.	.....	126,467	1,308,022
U. S. Mex.	194,235	250,177	1,029,214
Interocean	50,640	152,845	729,161
Swiftsure	60,740	132,300	1,366,329
Tal Vez	.....	.....	235,630
Panuco-Boston	.....	.....	813,751
Cosmos	.....	.....	37,615
Totals	16,852,470	18,363,980	187,019,781

Okmulgee, Okla., Jan. 13.—Kingwood Oil Company directors have declared a cash dividend of 10 per cent on the common stock, which is payable January 10 to stock of record January 5.

Tulsa, Okla., Jan. 16.—At the annual meeting of directors of the Deck Clamp Tank Company held here recently J. F. A. Deck of Okmulgee was re-elected president. Other officers of the company include C. A. Mechling, vice president; J. K. Adair, secretary; F. B. Berlin, treasurer, and George W. Deck assistant secretary and treasurer.

Boston, Mass., Jan. 15.—The Beacon Oil Company directors have declared regular quarterly dividends of 50 cents on the common and $1.87½ on the preferred stock.

New York, Jan. 10.—There were some 21,456 stockholders of Middle States Oil Corporation on January 1, this year, as compared with 1,632 on record when the stock was listed on the New York Stock Exchange in October, 1919.

Review of Foreign Petroleum Operations

Oil has influenced early religions, caused wars and built empires

The history of petroleum dates back more than 4000 years. It has influenced early religions, caused wars, and built empires.

It is reported that as far back as 2000 B. C. the Babylonians and the tribes of Ninevah made use of petroleum. Oil from the island of Sicily was burned in the lamps of the Romans. Marco Polo in the thirteenth century describes the worship of the fire caused by burning petroleum springs in a fire temple at Baku. From those ancient days onward the search for oil has developed into the most lucrative and largest industry the world has ever known. The story of this great development, the early struggles, failures and successes, make interesting history. Brief reviews of these developments of the large foreign fields have been compiled for the readers of The OIL WEEKLY.

Roumania

Roumania, with the exception of Russia, is the largest oil producing country in Europe. The principal oil fields are located along the southeast edge of the Carpathian Mountains north of Bucharest. Most of the oil deposits are situated around salt domes quite similar to those of the Texas Gulf Coast. Very little has been published concerning the history of the Roumanian fields.

Active development in Roumania appears to date from about 1835 when a well was dug north of Bacau, which yielded sufficient oil for local use. In the early periods all the wells were dug by hand and the oil bailed out and shipped in barrels. Considering the crudeness of the methods a surprisingly large production was obtained reaching in 1875 a total output of over 100,000 barrels all from hand-dug wells.

Drilling outfits were introduced from the Galician fields about 1884 thus enabling deeper drilling which greatly increased production and stimulated the search for new fields. Altogether over 30 fields have been opened up though only about 12 are of any importance, as follows: Campina, Telega, Huncuchigura, Bustenaria, Doicesti, Ochiuri, Tuicani, Moreni, Filipesti, Baicoi, Tintea, Moinesti.

Production in 1913

In 1913 the total production of all the Roumanian fields reached 13,554,768 barrels. During the European war Roumanian oil became of prime importance to the fighting nations, and the object of attack and depredations. The fields were first held by the Allies but were lost to the Germans in November, 1916. Before retreating, troops plugged and filled all the holes with junk of all sorts and burned the oil in all the tanks. As soon as the Germans captured the fields their experts worked unremittingly to restore some of the production. Paraffin impressions were made of the iron scraps in the holes and special fishing tools were constructed to fish out the debris from depths ranging between 900 to 2000 feet. So well did the work progress that many holes supposed to be absolutely ruined were cleaned within a month's time and soon brought into production. In 1918 the Allies reconquered the fields after they had been plugged and destroyed a second time.

Since the war the fields have been recovering, and now (1922) are nearly back to normal conditions though suffering somewhat from the lack of transportation facilities and modern equipment.

Venezuela Oil Concession's new well at La Rosa, making 52,000 barrels a day. Well later sanded and will remain so for a time

Production by Years

1900	1,628,535
1901	1,678,320
1902	2,057,935
1903	2,763,117
1904	3,599,026
1905	4,420,987
1906	6,378,184
1907	8,378,184
1908	8,252,157
1909	9,307,278
1910	9,723,806
1911	11,107,450
1912	12,976,232
1913	13,554,768
1914	12,826,579
1915	12,029,913
1916	10,298,208
1917	2,680,000
1918	8,730,235
1919	6,614,000
1920	7,435,344
1921	8,368,000

Poland (Galicia)

The principal Polish, formerly known as the Galician, oil fields lie

WESTCOTT
DRILLING VALVES

For Oil and Gas Wells

To Hold Any Pressure in the Earth

To Fit Any Casing in the Hole

Steel or Semi-Steel—Flange or Screw

Manufactured by

Westcott Valve Company, Inc.

Seneca Falls, New York

Carried in Stock At

Continental Supply Co. Stores:
Houston, Tex.
Shreveport, La.
El Dorado, Ark.
Smackover, Ark.

Westcott & Greis:
Dallas, Tex.
Tulsa, Okla.

DuVal-Kirk Co.:
Los Angeles, Calif.

Say you saw it in The Oil Weekly

THE HARDENBURG UNDERREAMER

Has built up a successful performance record in every field where it is in use. It is standard equipment with drillers the country over.

Mechanically perfect in design and construction, the Hardenburg Underreamer is

—Safest

—Strongest

—Most Durable

—Most Satisfactory

Note the distinctive features of the Hardenburg — Strength in Construction—Each Cutter controlled by Independent Springs—Length of Cutters, providing much Metal for Dressing—Cutters easily and quickly removed.

Insist on getting the

HARDENBURG

Manufactured and Sold by

Western Supply Company

Main Office and Shops: Tulsa, Oklahoma
Branches: Apperson and Covington

Say you saw it in The Oil Weekly

Winter scene in the Galician fields

along a northwest-southeast belt on the north slopes of the Carpathian Mountains stretching from Pilzno on the northwest of Kosow on the southeast, a distance of some 650 miles in length and 80 miles in width. Altogether over 170 oil fields exist today along this belt, though only Boryslaw, Tustanowice, and Mraznica are now of great importance.

Historical records show that oil was obtained and used for axle grease from Boryslaw as far back as 1794. In 1810 Hosepf Haeker and John Mitis constructed an outfit by which they put the oil through some process of distillation and produced a distillate resembling kerosene, which was used for lighting the streets of Prague. This was the first refinery to be built in Europe. The first real still was built in 1852 by a chemist, Ignacz Lukasiewicz.

The first well was hand dug at Bobrka in 1854, and the oil was collected by skimming it from the top of water. One well completed in 1854 to a depth of 100 feet produced over 17 barrels per day. Drilling tools were introduced in 1862, and the first Canadian system of drilling was brought to Poland by a Scotchman, named MacGarvey, in 1884. From this date on development was more rapid, and oil fields were discovered in quick succession. The great Boryslaw field was opened up by MacGarvey in 1892. In 1902 Dr. Szczujski discovered the Tustanowice field by briging in a well from a depth of 3300 feet yielding 1700 barrels daily.

By 1900 over 170 oil fields had been developed, and of these about 80 are being worked at the present time. The great drilling activity is now in the Hordyscze and Mraznica districts. Salt water has invaded most of the old oil fields in Poland, and production in this country is on the decline.

Production by Years

The following statistics show the total production of the principal fields:

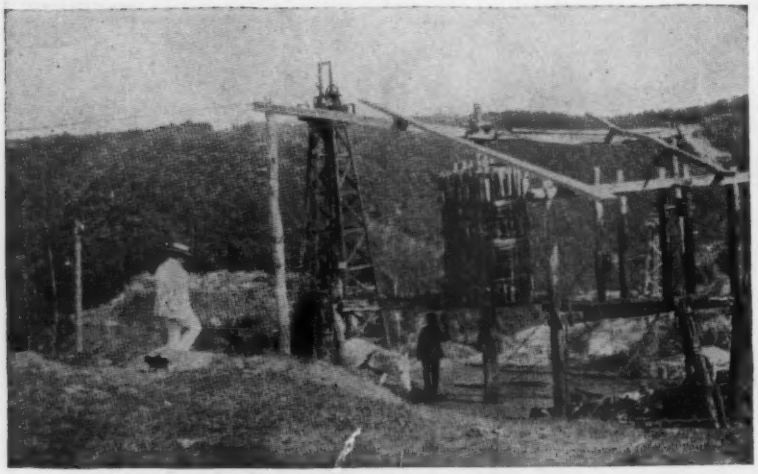
1908	8,387,172
1909	10,347,372
1910	8,707,284
1911	7,153,905
1912	5,648,170
1913	4,950,880
1914	4,059,110
1915	3,355,495
1916	4,671,095
1917	4,340,710
1918	4,256,208
1919	3,833,390
1920	3,440,569
1921	3,099,613

Russia

The principal oil districts of Russia are located in the extreme southeast corner of that great country on the west side of the Caspian Sea. The most famous field, and without doubt the greatest oil field in the world, is at Baku situated on the Aspheron Peninsula. Natural gas seeps and petroleum deposits on the Aspheron Peninsula have been known for many centuries, and very early history reveals that crude petroleum was collected by the Persians and shipped into Persia and even into India, where it was utilized as a medicine.

In 1806 the Russian government granted a monopoly of the oil fields to a merchant named Meerzoef. This monopoly continued till 1872 when the output was reported to be 1,500,000 poods (12,450,000 barrels) per annum. From 1872 to 1877 active development was greatly hindered by annoying taxation, but the fees were gradually adjusted and the petroleum industry increased in importance yearly. Between 1898 and 1901 the Baku fields reached a high point in development and supplied about one-half the oil produced in the world.

Till 1871 all Russian petroleum was obtained from hand-dug pits, the deepest rarely exceeding 50 feet. In 1871 the first oil well was bored with highly successful results and opened up a new era in the development of Russian oil fields. The result of the deeper drilling was to bring in great gushers which flooded the surrounding country and totally demoralized the petroleum market. In 1875 the Nobel brothers, two Swedish engineers, opened up a small refinery at Baku which was destined to revolutionize the oil industry. These well-known pioneers, who introduced scientific methods, built a pipeline from Baku to Blacktown, where the refinery was located, and constructed the first



One of the hand dug wells at Gura Ocnitei Roumania, producing oil for 20 years. Note the gin being operated by a horse.

tank wagons, tank cars, and tank steamers used in Russia.

Oil Land Grants

Till about 1880 the oil properties were owned largely by Armenians and Tartars. It was at this time the custom of the Russian government to present grants of oil lands to distinguished officers and generals, who in most cases quickly disposed of these grants to the Armenian Jews. In 1883 Rothschild entered the country and organized the Russian Standard Oil Company and greatly contributed to the advancement of the industry by furnishing a ready market for refined products through his broad European connections.

The first English company to start exploitation in Russia was organized by Mr. Alfred Suart in 1896. Mr. Suart drilled the first well in 1903 at Grosny and opened up that prolific pool, which is now the second largest in Russia and has produced over 300,000 barrels per acre.

Till 1895 the extract of kerosene and a few lubricating oils was the chief aim of the refiners, and all the other rich ingredients were looked upon as waste products. Later modern refineries were established and till the destruction wrought by the Soviet government the exportation from this country to the other countries of Europe was very large.

In 1905 an 8-inch pipeline was completed to Batoum which was capable of transporting to seaboard 8,000,000 barrels of kerosene per year.

In 1908 the Surakhany oil field was developed by deep wells and large gushers of typical Baku oil resulted.

In 1909 oil was discovered at Maikop since which time a fair production has been obtained, but the field has proved small. About 4,000,000 barrels of oil has been obtained up to 1918 and in that year the production was said to be 250,000 barrels. Since then reports have been unreliable and undoubtedly little is being done in the field.

In 1910 a new field was opened up in the Embar district north of the Caspian but it never reached large dimensions. In 1911 oil was discovered on Cheleken Island.

2,500,000 Barrels an Acre

The immense productivity of the Baku sands is almost beyond comprehension. The authentic records show that one plot at Bibi Eibat has yielded nearly 2,500,000 barrels per acre and that the entire operated area of 250 acres has produced an average of 1,500,000 barrels per acre. A 2600-acre tract of the main Baku field has yielded an average of over one-half million barrels and is still capable of enormous production. Enough oil has been extracted from this tract to cover the area to a depth of 63 feet.

Grosny has yielded a total of over 10,500,000 barrels from about 8,000 acres, and one of the best located plots has yielded 320,000 barrels per acre and is still far from exhausted.

The following production table gives statistics up to 1918 when war conditions wrought havoc in the area, and practically brought an end to further development. During 1921 some of the fields showed some activity and the production figures for the first six months are given below. The daily crude oil production is now estimated to be about 43,000 barrels.

Production by Years

	Barrels
1907	61,850,734
1908	62,186,447
1909	65,970,350
1910	70,336,574
1911	66,183,691
1912	68,019,208
1913	62,834,356
1914	67,020,522
1915	68,548,062
1916	72,801,110
1917	69,000,000
1921	29,150,000

Persia

Indications of oil may be found almost anywhere in the Persian Empire, but they are strongest and most prevalent along a belt parallel with the southwestern border of the country north of the Persian Gulf (see map in The OIL WEEKLY of October 14, 1922). The greatest field and one of the wonder oil fields of the world, one which has made the Persian Oil Company, is located about 100 miles north of the Persian Gulf near the town of Schustar; it is called the Schustar or Maidan-i-Naphtun oil field.

The first working of oil in Persia, according to Herodotus, took place at Kir-ab-us, now known as Kirab, about 57 miles northwest of Schustar in about 450 B.C. Europeans became interested in these oil resources about 1900 when the Persian Bank Mining Rights Corporation, an English company drilled two wells, one at Daliki which at a depth of 124 feet found a little oil, and a second on the island of Qishm which was a failure. In 1901 an Englishman named d'Arcy obtained a 60-year concession on 500,000 acres in the southern and western part of Persia, and started a new system of investigation. During 1903-4 he drilled two wells at Kasr-i-Shirin and spent altogether nearly $1,000,000 in prospecting and drilling.

In 1904 the first hole was started near Schustar, which at a depth of 1100 feet struck oil and spouted 70 feet over the derrick thus opening up the great Persian resources. In 1909 the Anglo-Persian Oil Company was formed to work the concession obtained by d'Arcy.

In 1917 the Russo-Persian Petroleum Company obtained a concession covering the northern part of Persia and started prospecting for oil in the district of Ardebil and in the provinces of Gilan, Mazanderan, and Astrabad.

30 Gushers

By far the most important developments are the Maidan-i-Naphtun and Schustar fields. Up to 1916 about 30 wells had been drilled all of which were gushers. In

ROTARY CABLE
THE FEDERAL SUPPLY CO TOOLS
DRILLING FISHING

RED DIAMOND BRAND

Federal Bits Are Better Bits

DESIGN–WORKMANSHIP
MATERIAL

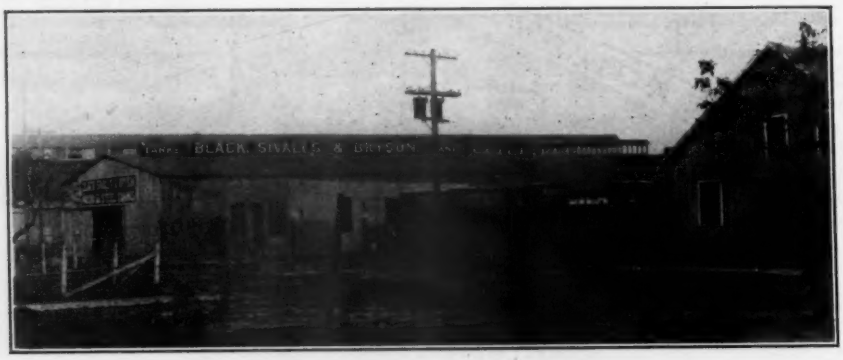
That's the whole story—
but it means money saved
on every well

Complete information and prices sent on request—Write

The Federal Supply Company

MEXIA Texas
FT. WORTH Texas
ELECTRA Texas

Say you saw it in The Oil Weekly



Tulsa warehouse of Black, Sivalls & Bryson

The Parable of the Certain Rich Oil Operator

There was a certain rich oil operator in an Oklahoma field last summer.

Like hundreds of other producers he had not taken any precautions against evaporation. His lease tanks were the ordinary kind, exposed to the summer's heat.

Two weeks after one 250-barrel tank had been filled, the crude was gauged. Imagine his surprise to find it only held 225 barrels and the gravity had dropped two degrees.

Think what that would have meant today when he not only would have lost 25 barrels of crude in actual measurement but sustained a loss of 20 cents a barrel on the remainder, now that the pipe line companies are buying crude in the gravity basis.

That certain Burbank operator could have saved both the quantity and quality of his crude had he been using Perfection Vapor Pressure Tanks.

Long before this he would have paid for an entire battery. His standardization on the Perfection line would be paying him a daily dividend.

Perhaps you are in the same boat as that Oklahoma operator.

Then you had better get in touch today with our nearest branch office. Have our representative show you one of the several Perfection Vapor Pressure tanks he has in stock. He will be glad to explain the extreme simplicity that puts the PERFECTION Vapor Pressure tank "head and shoulders" above every other tank on the market.

On installation you will realize as never before that the PERFECTION LINE WILL PAY YOU DAILY DIVIDENDS.

Black Sivalls & Bryson
INC.
BARTLESVILLE ~ OKLAHOMA

1916 the production was generally conceded to be about 2,000,000 barrels, but since then little information has been given out by the Anglo-Persian Oil Company. During the last few years a considerable number of other wells have been brought in or drilled down to the oil sand, but further development is awaiting better market facilities.

The estimates of the U. S. Geological Survey placed the production of oil in Persia at 7,200,000 barrels, thus ranking the country fifth in importance in the output of petroleum.

The Anglo-Persian Oil Company completed in 1913 its refinery on the island of Abadan located at the head of the Persian Gulf; this had an estimated annual capacity of 1,750,000 barrels, but since that time the refinery has been considerably increased.

Since Persia became a constitutional manarchy in 1906, the people have been stimulated by a stronger feeling of national pride than ever before, and they recently completed a new program of reconstruction which is now being put into effect. In accordance with these plans of progress, an American, Dr. A. C. Millspaugh, has been appointed by the Persian government as Administer-General for the Persian Empire, and it is hoped that this expert on economic and financial problems may be able to rescue this ancient nation from its former financial mismanagement and thus contribute to the development of its rich mineral resources. An interesting feature of the situation is the negotiation of an oil concession by the Standard Oil and Sinclair Companies covering the five northern provinces, reported to be now underway.

Egypt

The oil resources in Egypt have been developed only within the last 10 years, and though this country has already attained notable importance, the petroleum interests here have attracted little attention.

Old Roman records mention petroleum occurrences at Gebel Zeit about 163 miles southeast of Suez. The next account that describes oil in Egypt is the report of the Societe Soufriere which mined for sulphur near Gebel Zeit and found petroleum floating on the pools of water in excavations.

It was in 1885 that the Egyptian government began to show an interest in these oil indications, and accordingly holes were drilled and fair supplies obtained. In 1886 L. H. Mitchell and Colonel Stewart investigated these resources on a broader scale and they reported very favorably regarding the productivity of the country. Upon the

A flowing well in Egypt

organization of the Department of Mines in 1906 new investigations were begun, and in April of that year the first flowing well was brought in at Gemsah.

In 1914 the world was startled by the news of a gusher at Gemsah the initial flow of which was about 18,000 barrels daily. This aroused the government to a realization of the probable extensive resources of the area, and further exploitation took place. This gusher produced to the end of 1914 a total of 316,500 barrels. In 1915, however, water from a source as yet unknown began to invade the field, and all attempts to check the destructive condition have been unsuccessful, so that production has steadily declined and is now unimportant.

Third Field Opened

In October, 1914, the Hurghada field, 35 miles south of Gemsah, was opened up by a well with an estimated flow of 9,000 barrels daily. Since then the Anglo-Egyptian Oil Fields Ltd. (Royal Dutch Shell Interests) has completed nearly 85 tests of which about 35 are productive. This field has proved much more prolific than Gemsah. In 1921 and 1922 a third field near Hurghada has been opened up and several new wells have been completed.

The Egyptian government has been actively engaged in investigating the country bordering on both sides of the Gulf of Suez, and the results of these efforts seem to show that large quantities of petroleum await development. A serious obstacle is the absence of fresh water over much of the country, and it may be necessary to pipe considerable quantities into certain arid areas in order to carry on development of the oil resources. The government is completing a refinery, and wild cat drilling under government supervision is going on at Aby Durba and Abu Shaar.

Production by Years

1911	9,150
1912	205,905
1913	94,635
1914	777,038
1915	262,208
1916	411,000
1917	1,008,750

The greatest annual production for Egypt was in 1918, when approximately 2,079,000 barrels were recorded. In 1920 the output dropped to about 1,000,000 barrels, but in 1921 nearly 1,260,000 barrels were produced.

Dutch East Indies

The famous oil fields of the Dutch East Indies are located mainly on the islands of Java, Sumatra, and Borneo. The names of the present producing fields are listed, as follows:

Sumatra—Perlak, Telaga Said, Boeloe Teland, Moeara Enim, Babat, Ramok, Soeban Djeriji, Soeban Boeroeng.

Java—Tinawoen, Panolan, Made, Djepon, Twelve Dessas.

Dutch Borneo—Louise, Tarakan I, Tarakan II, Nonny, Moeara.

British Borneo—Mira.

The first published account of oil occurrences in these islands dates 1840, though so far as known no attempts were made at exploration till 1866. In that year a hole dug near the northwest coast of Borneo to a depth of about 9½ feet produced about 12 gallons of oil daily.

The first concessions were obtained from the Dutch government by Dr. Zylkens in 1883 in Sumatra. The first well was drilled in May 1883 and produced about 50 barrels of oil. In 1886 the government employed an expert, named Stoop, to study the best methods of developing the oil resources. After making his report to the government he obtained a concession at the extremity of Java and organized the Dordtsche Petroleum Company to drill on the land. The first well was successful, and between 1887 and 1893 30 wells were completed having a total annual production of about 100,000 barrels.

First Refinery in 1895

The first refinery was constructed in 1895 at Uronoko. In May, 1896, there were three producing fields: Soerabaja with 30 wells, Lidah with 40 wells, and Kutai with 10 wells; at Natatao one well was

drilled, and a gas field had been discovered at Gregor.

Work was started in Borneo by J. M. Monton, a Hollander, who in 1888 obtained oil and coal concessions near the mouth of Mahakam river. Lacking means to exploit these concessions Monton offered an interest in the land to Dutch capitalists who refused his offer. He then went to London and obtained the cooperation of Sir Marcus Samuels, an English business man, who organized a company later to become the Shell Transport and Trading Company, now a part of the Royal Dutch Shell. The first wells were drilled on the Sanga Sanga anticline in 1897 and obtained oil from depths less than 200 feet. At present this area (Nonny and Moeara fields) is one of the richest in the Dutch East Indies and contains no less than six distinct oil horizons. Since 1897 rich oil deposits have been discovered also on Tarakan Island and on Timor Island, and in British North Borneo.

One Large Company

The small operating companies that drilled the discovery wells have gradually been absorbed into one large company known as the Royal Dutch Shell Group, which includes the Dordtsche Petroleum Company, Royal Dutch Company, Shell Transport and Trading Company, Bataafsche Petroleum Company, Shanglai-Langkat Company, and others.

According to the U. S. Geological Survey statistics the yearly production figures are as follows:

	Barrels
1908	10,282,357
1909	11,041,852
1910	11,030,620
1911	12,172,949
1912	10,845,624
1913	11,172,294
1914	11,834,492
1915	12,386,800
1916	13,174,399
1917	12,928,955
1918	13,284,936
1919	16,878,429
1920	17,929,210
1921	18,000,000

Owing to the low cost of recovery, shallow depths of wells, excellent quality of the crude, and location of the islands, the Dutch East Indies oil fields have been among the biggest dividend payers of the oil producing countries of the world. This group of fields now ranks fourth among the producing countries.

Mexico

The use of petroleum in Mexico dates far back into Indian history as revealed by excavations, and later the chronicles written by the leaders of the Spanish conquest which terminated in 1521 mention the crude product as popular for perfume among the women as well as for lighting purposes. The first white man to attempt to exploit the oil resources of Mexico, however, was Dr. Autrey. This pioneer in 1868 dug test holes in the Furbero region and even refined some of the oil and produced kerosene, but his methods were so crude that his efforts brought no success.

Between 1880 and 1883 several attempts were made to discover large quantities of petroleum. A well near Guadalupe produced a few bottles of light oil; a test at San Jose was dry; but both these holes were too shallow. Two holes were drilled with Canadian tools to depths of about 400 feet near the present Potrera del Llano field and obtained some oil. In 1898 a test was made near the present Tierra Blanca field, but the depth was not great enough to touch the rich deposits lying beneath the surface.

Turning Point in 1900

The year 1900 marked a turning point in the oil developments of Mexico. The Cecil Rhodes interests began the first operations on any important scale, and they drilled as deep as 1500 feet with no success. In 1901 the Mexican Petroleum Company was organized, and they completed a well near Ebano from which over a half million barrels of oil were exported. In 1904 the first great well of the Tuxpan region came in. The southern fields of Tehuantepec then began to show promise of a great future. In 1906 President Diaz made a large concession of lands to Pearsons Company. The great gusher of Dos Bocas in 1908 came in and caught fire; and though many lost fortunes, this terrible disaster proved a wonderful advertisement, and foreigners arrived in large numbers for concessions.

The year 1910 marked the discovery of the Panuco and Topila fields and established Mexico as one of the foremost oil producing countries. The Tepetate-Casiano and Portrero-Alazon fields were established. In 1913 the Alamo field was opened up, and the area between the Tepetate-Casiano and Potrero-Alazan pools was proved, and the Aquila developed the great Amatlan field. The next striking event was the tremendous Cerro Azul gusher of 1916 from a depth of only 1752 feet. In 1918 activities proved up the area of Southern Chinanpa-Los Naranjos field between Amatlan and Tepetate Casiano. In December, 1918, salt water began invading the Potrero well 4, and practically killed the entire field with overwhelming rapidity, and today the flooding by salt water has proved a serious menace in all the fields except Panuco. Since the Cerro Azul gusher startled the Mexican oil industry, no strikingly huge discoveries have been made.

Spectacular and Dramatic

From 1910 the rise and development of Mexico as an oil-producing country has been spectacular and dramatic. Today it is second only to the United States in amount of output, and together with the United States it produces 90 per cent of the world's production, now that Russia is no longer a factor. The following table shows the striking rapidity with which Mexico has risen to fame:

	Barrels
1901	10,000
1902	40,000
1903	75,300
1904	125,500
1905	251,250
1906	502,500
1907	1,000,000
1908	3,900,000
1909	2,700,000
1910	2,600,000
1911	12,500,000
1912	16,500,000
1913	25,600,000
1914	26,200,000
1915	33,000,000
1916	40,500,000
1917	55,200,000
1918	64,600,000
1919	87,000,000
1920	163,000,000
1921	193,397,000

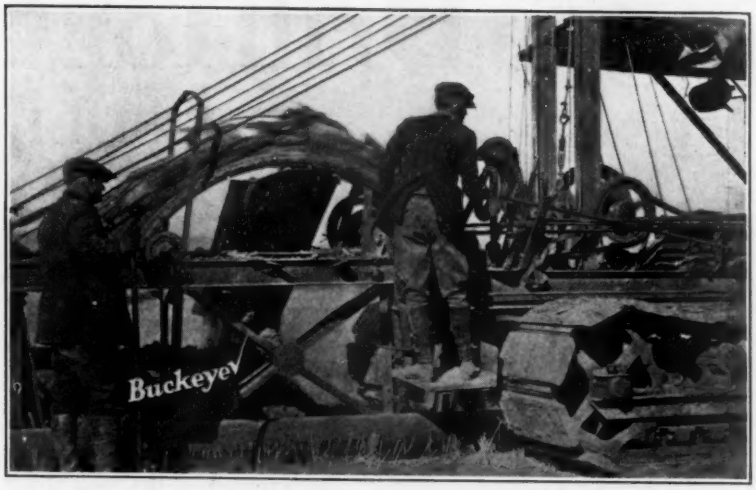
The whole area of the country is being rapidly and carefully explored with the view of opening up new areas as old ones decline.

Venezuela

Venezuela took the lead among oil producing countries of South America in 1921, having produced over one million barrels of oil. Yet the oil resources of this very tropical country are hardly scratched and hence its history as a petroleum producing country has only begun.

Though exploration for petroleum has extended over a greater part of the country, actual development thus far has been confined to the region lying north of Orinoco river and mostly within the district surrounding Lake Maracaibo. Here is located the famous Mene Grande ridge along which the greatest oil seepages known in the world are found. Asphalt occurs at the seepages in the form of numerous great cones from five to 10 feet high and 30 feet in diameter. Near here also is located the famous pitch lake consisting of an expanse of solid asphalt covering 1100 acres.

The first company to operate in



They Hang Up Records With Buckeyes

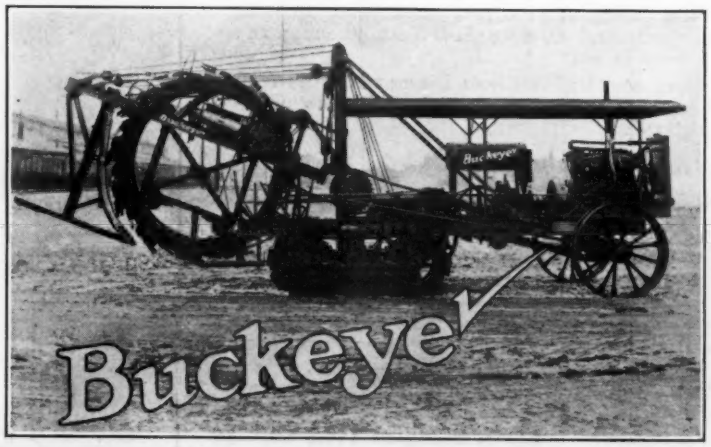
"This is a record it is not believed will be beaten in the Southwest" says an article in The Oil Weekly referring to the 20½-mile Pierce Junction pipe line built by the Humble Pipe Line Company. The line was put under ground in 17 days. Two Buckeye Excavators and a Buckeye Pipe Screwing Machine helped make this record.

Shortly afterward this record was smashed, according to National Petroleum News in laying a 72-mile line in 30 days from Elk Basin, Wyoming, to Billings, Montana. Buckeye Excavators and Pipe Screwers helped here, too.

Let us show you how Buckeye helps cut cost of trench work and retainer walls. Bulletin on request.

The Buckeye Traction Ditcher Co, Findlay, O.

Manufacturers of Pipe-Line Trench Excavators and Pipe Screwing Machines



Branch Sales Offices:

New York
San Francisco
Tulsa, Okla.
Miami, Fla.
Chatham, Ont.
Chicago
Los Angeles
Denver
Mason City, Ia.
Salt Lake City

Going to Drill for Oil?

USE SULLIVAN DIAMOND DRILLS

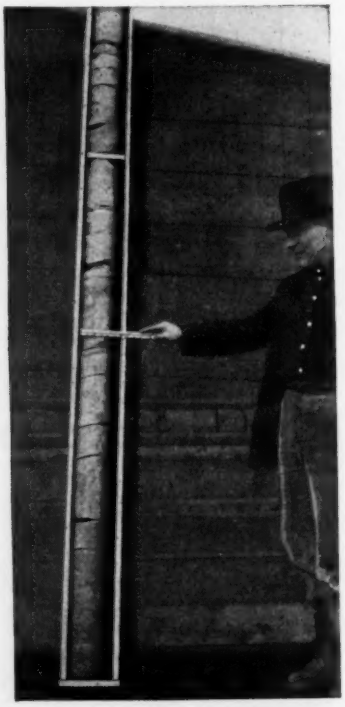
For speed, low cost and accuracy in information obtained, bore your wildcats or producing wells with Sullivan Diamond Drills.

Will YOUR drill take rock cores like these?

A Sullivan "P-2" Drill near Hardin, Montana, is bringing up these six-inch samples of the rock strata penetrated in the search for oil.

Not much doubt as to the kind of ground, is there?—or as to the exact thickness of the formations, either.

Sullivan Diamond Drill boring for oil in Texas. (3400 feet.)



As For Soft Ground—
They Kept This Hole Open 2000 Feet With Mud Fluid

A Sullivan Diamond Drill crew in the Tampico field recently set 6⅝-inch casing at 1100 feet, then went on with 6-inch fish tail bit and mud fluid to 3141 feet, keeping the hole open all the way in soft ground.

The high rotating speed of Sullivan Diamond Drills (200 to 300 R. P. M.) enables them to use mud fluid more effectively than any "rotary".

Ask for Oil Well Bulletin 4269-O

Dallas Office, 331 Western Indemnity Building

U S A. OFFICES
Chicago
Birmingham, Boston, Butte, Claremont, N. H., Cleveland, Dallas, Denver, Duluth, El Paso, Huntington, W. Va., Joplin, Juneau, Knoxville, New York, Pittsburgh, St. Louis, Salt Lake, San Francisco Spokane

COMPRESSORS AIR LIFT DIAMOND DRILLS SHARPENERS FORGES
FORGE HAMMERS COAL CUTTERS ROCK DRILLS DRILLING CONTRACTORS

SULLIVAN TRADE MARK
MACHINERY COMPANY
122 S. Michigan Ave., Chicago

FOREIGN SALES OFFICES
Algiers, Brussels, Calcutta, Christiania, Durban, Natal, Havana, Lima, London, Madrid, Mexico City, Paris, San Juan, Santiago, Shanghai, Sydney, N. S. W., Tokyo, Toronto, Tunis, Turin, Vancouver

Say you saw it in The Oil Weekly

Venezuela was the Campania Petrolera del Tachira, a Venezuelan organization, which obtained a concession from the Venezuelan government in 1884. This company obtained a small production of oil at a location near San Cristobal by digging a number of shallow pits and using in general most antiquated methods for recovering and handling the oil.

However the output of the Campania Petrolera del Tachira constituted the entire production for this country till 1907, when the first important concessions for the exploitation of oil were granted. Since the curtain was raised in 1907, numerous companies have undertaken development, chief among which are the following: Maracaibo Oil Company, Caribbean Petroleum Company and Venezuela Petroleum Company, all three belonging to the Royal Dutch Shell interests; Standard Oil Company of Venezuela, British Controlled Oilfields, Ltd., New England Oil Corporation, Venezuelan Sun Company, The Texas Company, The Andes Corporation.

First Large Concession

The first large oil concession, covering the entire Maracaibo district, was granted to Antonio Aranguren in 1907 who transferred his interests to the Caribbean Petroleum Company in 1908. On this concession two small fields have been developed, one at Rio tarra and one at Rio de Oro. By far the best field, however, is located near Sucre on what is known as the Mene Grande anticline. About a dozen wells have been drilled and five or six of these have proved large producers yielding during 1920 a total of over 100,000 barrels, and during 1921 over 200,000 barrels.

Standard Enters

The Standard Oil Company entered Venezuela about 1912 and have obtained various concessions principally in the districts of Perija, Undaneta, Mara, Paez, Mirand, Colina, Marida, Trujillo, Tachira, Benitez, Maturin, Piar, and Territorio Delta-Amacura. So far this organization has done little toward development.

The Venezuela Petroleum Company obtained a concession from Francisco Arraiz in the vicinity of Acosta and Zamora. During December, 1922, they completed a well near a very large oil seepage located on the La Paz anticline northwest of Mene Grande. The well was reported to have come in with an initial production of 52,000 barrels daily. Thus a new chapter has been opened in the world history of petroleum production, and just at the time when the Mexican production begins to give way to salt water, Venezuela steps forward to take her place in supplying the all-necessary motive resource.

Dan J. Moran, general superintendent of production for The Texas Company, with headquarters at Houston, and J. L. McMahon, superintendent in charge of Wichita Falls district offices, inspected the company's holdings in the Panhandle section of the state last week. Mr. Moran also looked over the North Texas district oil fields before making his departure.

Edward M. Wheeler of Buffalo, New York, vice president and manager of the Eastern Oil Company, is now making an inspection of properties of the company in the Mid-Continent fields. His company last week found a showing for a good well in the Wilcox sand in the Depew district, the well being in the northwest corner of section 17-15-8.

Monthly Summary For 1921 and to Nov., 1922

	Domestic production of petroleum (petroleum transported from producing properties)		Imports of "mineral crude oil"		Exports of "mineral crude oil"		Stocks*		Estimated consumption of domestic and imported petroleum (deliveries to consumers)		
	Total (thousands of barrels)	Daily average (barrels)	Total (thousands of barrels)	Daily average (barrels)	Total (thousands of barrels)	Daily average (barrels)	Held last day of month (thousands of barrels)	No. days' supply based on daily rate of consumption	Total (thousands of barrels)	Daily average (barrels)	Number of producing oil wells completed during month
January, 1921	37,959	1,224,484	13,193	425,577	743	23,979	125,589	78	49,421	1,594,226	1,825
February, 1921 ...	35,366	1,263,071	11,384	406,580	794	28,368	132,222	94	39,323	1,404,393	1,574
March, 1921	40,905	1,319,516	12,303	396,875	750	24,188	139,499	96	45,181	1,457,452	1,452
April, 1921	40,040	1,334,667	10,104	336,797	748	24,922	146,399	103	42,496	1,416,533	1,224
May, 1921	41,985	1,354,355	9,148	295,078	874	28,179	155,267	116	41,391	1,335,194	1,405
June, 1921	40,354	1,345,133	10,255	341,842	586	19,538	162,463	114	42,827	1,427,567	1,471
July, 1921	40,252	1,298,452	8,047	259,575	538	17,365	168,821	126	41,403	1,335,580	1,162
August, 1921	40,984	1,319,161	3,352	108,136	885	28,542	169,682	124	42,500	1,370,968	952
September, 1921 ..	36,508	1,216,933	9,139	304,615	881	29,352	172,874	125	41,574	1,385,800	788
October, 1921	35,539	1,146,420	11,635	375,336	747	24,085	174,149	120	45,152	1,456,516	752
November, 1921 ..	37,880	1,262,667	12,994	433,125	869	28,967	178,260	117	45,894	1,529,800	899
December, 1921 ...	41,957	1,353,452	13,753	443,654	525	16,949	185,623	120	47,819	1,542,548	1,108
January, 1922	43,141	1,391,645	13,097	422,474	727	23,440	196,228	136	44,906	1,448,581	1,151
February, 1922	40,814	1,457,642	12,077	431,337	659	23,532	208,851	148	39,609	1,414,607	1,143
March, 1922	46,634	1,504,323	14,004	451,742	806	26,004	221,588	146	47,095	1,519,194	1,323
April, 1922	44,635	1,487,833	11,659	388,646	923	30,784	235,962	173	40,997	1,366,567	1,442
May, 1922	46,456	1,498,580	14,018	452,186	772	24,882	247,093	158	48,571	1,506,806	1,511
June, 1922	45,559	1,518,633	12,182	406,062	825	27,516	255,817	159	48,192	1,606,400	1,654
July, 1922	46,593	1,503,000	9,971	321,645	893	28,806	261,395	161	50,093	1,615,903	1,798
August, 1922	46,521	1,500,677	8,385	270,484	763	24,612	271,901	168	50,141	1,617,452	1,709
September, 1922 ...	45,291	1,509,700	6,462	215,400	1,127	37,566	273,278	166	49,249	1,641,633	1,572
October, 1922	47,885	1,544,677	7,408	238,968	1,127	37,566	274,902	161	52,928	1,707,355	951
November, 1922....	†47,889	1,596,300	6,462	215,400	741	23,903	275,856	155	53,443	1,781,433	873
December, 1922	†53,241	1,717,355	.....	.....	...	.....	.....	...	.....	.....	1,151

NOTE—Completed wells last three months do not include California.
*Net pipe line and tank farm stocks east of California and gross pipe line, tank farm, and producers' stocks in California to July, 1922, plus stocks of Mexican petroleum held in the United States by importers. †Subject to revision.

608,059 Wells Completed in United States

Since 1859 it is estimated that 429,897 oil wells and 54,725 gassers resulted

Houston, Texas, Jan 16.—According to the best available records a total of 608,059 wells have been drilled in the United States since the year 1859 to 1922, inclusive. For a number of years no record was kept of the number of producers of oil, gassers and failures—only the total number of completed holes being recorded. For this reason it is largely a matter of guesswork as to the percentage of producers of oil or gas in the years gone by.

The accompanying tables give the number of completions by years from 1859 to 1919 inclusive, and for the years 1920, 1921 and 1922, the completions are divided into producers of oil, gassers and failures. The OIL WEEKLY wishes to state it was through the courtesy of the statistical department of the American Petroleum Institute it was able to use the figures for the earlier years.

It will be seen by the figures for the years 1919 to 1922 that the producers of oil approximated 70.7 per cent of the total number of completed wells, since 73,348 wells were completed in the three years and the number of oil wells was 52983. Wells completed in California are not included in the three years, since no record is kept of failures in that state. According to this method, 429,897 producers of oil have been completed in the United States since the discovery of oil.

Using the same method it is found that the gassers were about nine per cent of the whole, 54,725 gas wells for the entire period. This leaves only 20.3 per cent of the whole, which must be dry holes, or holes abandoned for various reasons. This total then would be 123,435 failures since 1859.

The number of completions in a year did not pass 5,000 until 1894 when the total was 7,551 wells. The completions in 1895 and 1896 exceeded 13,000 each year, while for the next two years the number dropped to less than 10,000. From 1889 down to 1920, the number for each year played between 13,000 and 32,452. The record to date was 32,452 in 1920. The number in 1921 dropped to 18,631, but increased to 22,265 in 1922, the year just closed.

The completions in detail by years from 1859 to 1922 inclusive, follow:

Year	Total Completions	Year	Total Completions
1859	2	1890	8,347
1860	49	1891	5,101
1861	78	1892	3,771
1862	92	1893	4,170
1863	137	1894	7,551
1864	226	1895	13,069
1865	474	1896	13,808
1866	442	1897	9,538
1867	618	1898	8,644
1868	928	1899	13,984
1869	1,500	1900	15,517
1870	1,664	1901	14,372
1871	1,470	1902	15,407
1872	1,183	1903	18,365
1873	1,263	1904	20,261
1874	1,317	1905	16,731
1875	2,400	1906	19,057
1876	2,920	1907	19,872
1877	3,940	1908	16,909
1878	3,064	1909	18,327
1879	3,049	1910	14,940
1880	4,220	1911	13,768
1881	3,883	1912	17,180
1882	3,307	1913	25,590
1883	2,850	1914	23,137
1884	2,269	1915	14,157
1885	2,814	1916	24,619
1886	3,583	1917	23,407
1887	1,981	1918	25,684
1888	2,127	1919	29,071
1889	6,507		

Note—Figures for the years 1859 to 1907 are taken from the United States Geological Buletin 394; 1908 to 1919 from bulletin on petroleum, Standard Oil Company of California bulletin and other sources, while 1920 to 1922 inclusive are figures compiled by The OIL WEEKLY, although the last three years do not show figures for California. Previous to 1919, California completed wells are used, but no failures are taken into account.

Year	Total Completions	Producers	Gas Wells	Failures
1920	32,452	*25,179	....	5,673
1921	18,631	12,420	1,785	4,345
1922	22,265	15,384	1,970	4,911
Totals	608,059			

*Includes gassers.

Steel Trade Outlook For 1923 Favorable

Pittsburgh, Pa., Jan. 15.—Reports from the Chicago district are that the outlook for 1923 in the iron and steel trade is promising and that prices are more satisfactory than they have been in some time. All indications point for a continued good demand from tank builders, railroads, automobile makers, farm implement manufacturers and the building industry.

The Union Oil Company is in the Market for approximately 9,000 tons of steel for tanks and the Shell Company is figuring on buying some 3,500 tons.

Cleveland, O., Jan. 15.—Standard Oil Company (Ohio) directors have declared the regular quarterly dividend of $1.75 a share on the preferred stock, payable March 1 to stock of record January 26.

UNITED STATES FIELD STATISTICS FOR 1922

	Completions	Prod.	Gas	Failures	Initial Prod.	Annual Production
Oklahoma	5,428	3,540	598	1,290	1,087,146	147,414,000
*California	....	....	....	....	.....	138,907,000
Texas	4,381	3,072	....	1,309	1,419,933	117,106,545
Arkansas	706	615	20	71	424,930	15,869,635
Kansas	1,047	657	31	359	58,382	31,891,000
Louisiana	1,087	847	51	189	369,545	33,889,480
Wyoming	493	451	2	40	187,375	26,796,265
Montana	81	60	....	21	7,685	2,381,000
Illinois	396	307	9	80	11,139	9,409,000
Pennsylvania	1,654	1,218	250	186	16,404	7,495,000
Tennessee	47	33	....	14	99	10,000
Kentucky	2,354	1,875	68	411	48,347	9,053,000
New York	171	140	12	19	1,176	1,010,000
Ohio	2,647	1,654	459	534	22,474	6,775,000
West Virginia	1,516	727	463	326	8,078	7,015,000
Indiana	257	188	7	62	3,317	1,089,300
*Colorado	....	....	....	....	.....	96,500
Totals 1922	22,265	15,384	1,970	4,911	3,666,130	556,207,725
Totals 1921	18,631	12,420	1,785	4,345	2,815,458	469,639,000
Totals 1920	32,452	25,179	....	5,673	3,449,960	443,402,000

*Full figures not available.

World's Production of Crude Petroleum Since 1857, by Years and Countries, in Barrels of 42 Gallons

Year	Rumania	United States*	Italy	Canada	Russia	Galicia	Japan and Formosa	Germany	India	Dutch East Indies	Peru	Mexico	Argentina	Trinidad	Egypt	Other Countries	Total	Year	Pct. Prod. by U. S.
1857	1,977																1,977	1857	
1858	3,560																3,560	1858	.00
1859	2,000																2,000	1859	.00
1860	8,542	500,000	36														508,578	1860	98.3
1861	17,279	2,113,609	29														2,130,917	1861	99.1
1862	23,108	3,056,600	50	82,273		40,816											3,091,602	1862	98.8
1863	31,013	2,411,109	22	90,000		64,686											2,576,830	1863	94.5
1864	39,017	2,497,700	2,265	110,000		66,542											2,715,524	1864	91.9
1865																		1865	
1866	42,534	3,597,700	992	175,000	83,052												3,899,278	1866	92.3
1867	50,538	3,347,300	791	190,000	119,017												3,707,646	1867	90.2
1868	55,969	3,646,117	367	200,000	88,327												3,990,780	1868	91.3
1869	58,533	4,215,000	144	220,000	202,308												4,695,985	1869	89.8
1870	83,765	5,260,745	86	250,000	204,618												5,799,214	1870	90.7
1871	90,030	5,205,234	273	269,397	165,129												5,730,063	1871	90.8
1872	91,251	6,293,194	331	308,100	184,391												6,877,267	1872	91.5
1873	104,036	9,893,786	467	365,052	474,379												10,837,720	1873	91.3
1874	103,177	10,926,945	604	168,807	583,751												11,033,121	1874	91.5
1875	108,569	8,787,514	813	220,000	697,364	158,522											9,977,348	1875	88.1
1876	111,314	9,132,669	2,891	312,000	1,320,528	164,157	7,708										11,051,267	1876	82.6
1877	108,569	13,350,863	2,934	312,000	1,800,720	169,792	9,560	4,566									15,751,938	1877	85.4
1878	100,300	15,396,868	4,329	312,000	2,400,960	175,420	17,884										18,416,761	1878	84.7
1879	110,007	19,914,146	2,891	575,000	2,761,104	214,800	23,457										23,501,405	1879	84.3
1880	114,321	26,286,123	2,035	350,000	3,001,200	229,120	25,497	9,310									30,017,606	1880	87.6
1881	121,511	27,661,238	1,237	275,000	3,601,441	286,400	16,751	29,219									31,992,797	1881	86.4
1882	136,610	30,349,897	1,316	275,000	4,537,815	330,076	15,549	58,025									35,704,288	1882	85.0
1883	139,486	23,449,633	1,618	250,000	6,002,401	365,160	20,473	26,708									30,255,479	1883	77.5
1884	210,667	24,218,438	2,855	250,000	2,400,960	408,120	27,923	46,161									35,968,741	1884	67.3
1885	193,411	21,858,783	1,941	350,000	13,924,596	465,400	29,237	41,360									36,764,730	1885	59.4
1886	168,606	28,064,841	1,575	584,061	18,006,407	305,884	37,916	73,864									47,243,154	1886	59.4
1887	181,907	28,283,483	1,496	525,655	18,367,781	343,832	28,645	74,284									47,807,083	1887	59.2
1888	218,576	27,612,025	1,251	695,203	23,048,787	466,537	37,436	84,782									52,164,597	1888	52.9
1889	387,566	35,163,373	2,273	704,690	24,609,407	515,268	52,811	68,217	94,250								61,507,095	1889	57.2
1890	383,207	45,824,572	2,998	795,030	28,691,218	659,012	51,420	118,085	108,296								76,832,858	1890	59.9
1891	488,201	54,292,655	8,305	755,298	34,573,181	630,730	52,017	108,929	190,131								91,100,347	1891	
1892	593,175	50,514,657	18,321	779,753	35,774,504	646,220	68,901	101,404	242,284								88,739,219	1892	56.9
1893	535,255	48,441,566	20,069	804,406	40,456,319	692,669	106,384	99,390	298,969	600,000							92,035,057	1893	52.6
1894	575,200	52,892,276	25,843	726,198	46,140,174	649,546	141,744	122,254	337,218	800,000							103,062,510	1894	51.0
1895																		1895	
1896	543,348	60,960,361	18,149	726,822	47,220,633	2,443,080	197,082	429,979	1,427,132								114,159,183	1896	53.4
1897	770,286	50,424,516	13,482	700,837	54,399,568	2,226,368	218,559	545,704	2,551,649		47,536						121,948,575	1897	40.5
1898	957,886	57,071,430	16,121	808,570	61,894,068	2,317,104	285,399	583,427	2,296,003		70,831						131,124,242	1898	43.4
1899	1,425,777	57,020,850	16,121	913,498	63,620,529	2,346,503	353,590	1,078,264	2,253,355		80,963						149,132,116	1899	38.2
1900	1,678,320	69,389,104	16,159	756,629	85,168,556	3,251,544	1,110,290	313,630	1,430,716	4,013,710	274,800	10,345				120,000	167,434,434	1901	41.4
1901	2,058,939	69,389,104	16,159	756,629	85,168,556	3,251,544	1,110,290	313,630	1,430,716	4,013,710	274,800	10,345				120,000	167,434,434	1901	41.4
1902	2,765,117	100,461,317	17,876	486,647	79,591,244	5,144,359	1,109,038	353,674	2,617,263	2,430,465	286,723	40,200				126,000	194,030,076	1902	58.8
1903	3,599,026	117,080,960	25,476	552,575	78,536,655	5,947,783	1,419,471	637,431	3,385,468	6,508,485	345,934	125,625				140,000	218,204,391	1903	53.7
1904	3,599,026	117,080,960	25,476	552,575	78,536,655	5,947,783	1,419,471	637,431	3,385,468	6,508,485	345,934	125,625				140,000	218,204,391	1904	53.7
1905	4,430,987	134,717,580	44,027	634,095	54,960,270	5,765,317	1,472,804	560,963	4,137,098	7,849,896	447,860	251,250				130,000	215,202,167	1905	62.6
1906	6,378,184	166,095,335	59,875	569,753	58,897,211	5,467,867	1,710,768	578,610	4,015,803	8,180,657	536,394	502,500							
1907	8,118,207	166,095,335	59,875	788,872	61,850,214	5,467,867	1,710,768	578,610	4,015,803	8,180,657	536,394	502,500							
1908	8,282,157	178,527,355	50,966	527,987	62,186,447	12,612,295	2,070,148	1,009,278	5,047,188	10,283,197	1,011,180	3,932,900	11,472	160		120,000	285,552,746	1908	62.5
1909	9,327,278	183,170,874	42,388	420,755	63,970,350	14,032,799	1,889,563	1,018,837	6,676,517	11,044,852	1,316,118	3,634,000	2,713,500	57,143		120,000	298,616,405	1909	61.3
1910	9,723,806	209,557,248	50,830	315,895	70,336,574	12,673,688	1,930,661	1,032,522	6,137,990	11,030,620	1,330,105	20,753	18,431	142,857		120,000	327,937,629	1910	64.0
1911	11,107,450	220,449,391	74,709	291,096	66,183,691	10,519,270	1,658,903	1,017,045	6,481,203	10,172,949	1,368,274	12,552,798	13,119	285,307	9,150	120,000	344,174,355	1911	64.0
1912	12,976,232	222,935,044	53,778	243,336	68,019,208	8,315,174	1,671,405	1,031,050	7,011,493	10,172,949	1,581,743	16,556,215	47,007	436,805	205,905	120,000	352,446,598	1912	63.2
1913	13,554,768	248,446,230	47,198	228,080	62,834,356	7,018,130	1,642,009	1,995,764	7,930,149	11,172,204	2,133,261	25,696,291	130,618	503,616	94,635	120,000	383,547,399	1913	64.7
1914	12,826,579	265,762,535	39,849	214,805	67,020,522	15,033,350	2,738,378	1,995,764	7,409,792	11,834,802	1,917,802	26,235,403	275,500	643,533	277,038	120,000	403,745,342	1914	65.8
1915	12,029,913	281,104,104	43,898	215,464	68,548,062	4,158,899	3,118,464	1,995,764	8,202,674	12,386,800	2,487,251	32,910,508	516,120	1,750,000	262,208	110,000	427,740,129	1915	65.7
1916	‡110,298,208	300,767,158	50,585	198,123	‡172,801,110	6,461,706	2,897,179	8,491,137	‡13,174,399	23,559,645	40,545,712	796,920	928,581	411,000	225,000	461,491,225	1916	65.2
1917	‡12,681,870	335,315,601	‡50,334	205,332	‡169,000,000	‡5,965,447	2,898,654	8,078,843	‡13,328,955	23,559,417	55,292,770	1,144,737	1,599,455	1,008,750	‡7,004,973	506,702,902	1917	66.2
1918	8,730,235	355,927,716	35,053	304,741	40,456,182	5,591,620	2,449,069	8,000,000	‡13,284,936	23,536,102	63,828,327	1,321,315	2,082,068	2,079,750	‡7,390,080	514,729,354	1918	69.1
1919	6,614,000	377,719,000	35,000	241,000	25,495,000	6,054,000	2,175,000	7,500,000	8,735,000	15,428,000	2,616,000	87,073,000	1,183,000	1,841,000	1,501,100	750,000	544,885,000	1919	62.0
1920	7,435,344	443,402,000	34,180	196,937	25,429,600	5,606,116	2,139,777	212,046	7,500,000	12,529,210	2,816,649	163,540,000	1,665,989	2,083,027	1,042,000	14,221,125	694,854,000	1920	63.8
1921	8,568,000	472,183,000	34,400	190,338	29,150,000	5,167,000	2,447,000	200,000	8,000,000	16,958,105	3,699,280	193,397,587	1,747,410	2,354,000	1,255,000‖	19,913,880	765,065,000	1921	61.7
Total	173,829,000	5,932,091,000	** 25,053,000	1,933,171,000	174,347,000	45,257,000	17,320,000	131,458,000	236,542,000	33,496,000	729,921,000	8,972,000	13,711,000	8,219,000	77,572,000	9,511,997,000			

NOTE—Sources, entries totals in round numbers, as above. †Estimated in part. ‡Includes Cuba, 19,167; Venezuela, 127,743; Persia, 6,856,063. §Includes Persia, 16,672,540; Venezuela, **1,078,000. ††Quantity marketed. ‡‡Includes British Borneo, 1,411,000; France, 392,000; Algeria, 2,668; and England, 2,632. Figures from United States Geological Survey, Department of Interior.
1,433,000; British Borneo, 1,411,000; France, 392,000; Algeria, 2,668; and England, 2,632.

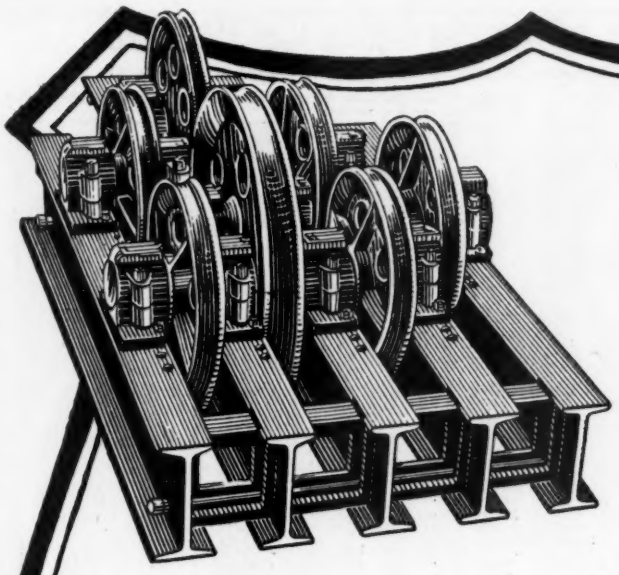
Petroleum Marketed in the United States, 1859-1922, in Barrels of 42 Gallons

(OIL BURNED ON LEASE NOT INCLUDED)

Year	Pennsylvania and New York	Ohio	West Virginia	California	Kentucky and Tennessee	Colorado	Indiana	Illinois	Kansas	Texas	Missouri	Oklahoma	Wyoming Including Montana	Louisiana	United States	Total Value	Year
1859	2,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,000	$ 32,000	1859
1860	500,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	500,000	4,800,000	1860
1861	2,113,609	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,113,609	1,035,668	1861
1862	3,056,690	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,056,690	3,209,525	1862
1863	2,611,309	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,611,309	8,225,663	1863
1864	2,116,109	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,116,109	20,896,576	1864
1865	2,497,700	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,497,700	16,459,853	1865
1866	3,597,700	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,597,700	30,455,398	1866
1867	3,347,300	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,347,300	8,066,993	1867
1868	3,646,117	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,646,117	13,217,174	1868
1869	4,215,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,215,000	23,730,450	1869
1870	5,260,745	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,260,745	20,503,754	1870
1871	5,205,234	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,205,234	22,591,180	1871
1872	6,293,194	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,293,194	21,440,503	1872
1873	9,893,786	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,983,786	18,100,464	1873
1874	10,926,945	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10,926,945	12,647,527	1874
1875	8,787,514	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8,787,514	7,368,133	1875
1876	8,968,906	31,763	120,000	12,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,132,669	22,982,822	1876
1877	13,135,475	29,888	172,000	13,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13,350,363	31,788,566	1877
1878	15,163,462	38,179	180,000	15,227	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15,396,868	18,044,620	1878
1879	19,685,176	29,112	180,000	19,858	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	19,914,146	17,210,708	1879
1880	26,027,631	38,940	179,000	40,552	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	26,286,123	24,600,638	1880
1881	27,376,509	33,867	151,000	99,862	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	27,661,238	25,448,339	1881
1882	30,053,500	39,761	128,000	128,636	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30,349,897	23,631,165	1882
1883	23,128,389	47,632	126,000	142,857	4,755	.....	.....	.....	.....	.....	.....	.....	.....	.....	23,449,663	25,790,252	1883
1884	23,772,209	90,081	90,000	262,000	4,148	.....	.....	.....	.....	.....	.....	.....	.....	.....	24,218,438	20,595,966	1884
1885	20,776,041	661,580	91,000	325,000	5,164	.....	.....	.....	.....	.....	.....	.....	.....	.....	21,858,785	19,198,243	1885
1886	25,798,000	1,782,970	102,000	377,145	4,726	.....	.....	.....	.....	.....	.....	.....	.....	.....	28,064,841	19,996,313	1886
1887	22,356,193	5,022,632	145,000	678,572	4,791	76,295	.....	.....	.....	.....	.....	.....	.....	.....	28,283,483	18,877,094	1887
1888	16,488,668	10,010,868	119,448	690,333	5,096	297,612	.....	.....	.....	.....	.....	.....	.....	.....	27,612,025	17,987,620	1888
1889	21,487,435	12,471,466	544,113	303,220	5,400	316,476	33,375	1,460	500	48	20	.....	.....	.....	35,163,513	26,963,340	1889
1890	28,458,208	16,124,656	492,578	307,360	6,000	368,842	63,496	900	1,200	54	278	.....	.....	.....	45,823,572	35,365,105	1890
1891	33,009,236	17,740,301	2,406,218	323,600	9,000	655,482	136,634	675	1,400	54	25	30	.....	.....	54,292,655	30,529,553	1891
1892	28,422,377	16,362,921	3,810,086	385,049	6,500	824,000	136,634	521	5,000	45	10	80	.....	.....	50,514,657	25,906,463	1892
1893	20,314,513	16,249,769	8,445,412	470,179	3,000	594,390	2,335,293	400	18,000	50	50	10	.....	.....	48,431,066	28,950,326	1893
1894	19,019,990	16,792,154	8,577,624	705,969	1,500	515,746	3,688,666	300	40,000	60	8	130	2,369	.....	49,344,516	35,522,095	1894
1895	19,144,390	19,545,233	8,120,125	1,208,482	1,500	438,232	4,386,132	200	44,430	50	10	37	3,455	.....	52,892,276	57,632,296	1895
1896	20,584,421	23,941,169	10,019,770	1,252,777	1,680	361,450	4,680,732	250	113,571	1,450	43	170	2,878	.....	60,960,361	58,518,709	1896
1897	19,262,066	21,560,515	13,090,045	1,903,411	322	384,934	4,122,356	500	81,098	65,975	19	625	3,650	.....	60,475,516	40,874,072	1897
1898	15,948,464	18,738,708	13,615,101	2,257,207	5,568	444,383	3,730,907	360	71,980	546,070	10	.....	5,475	.....	55,364,233	44,193,359	1898
1899	14,374,512	21,142,108	13,910,630	2,642,095	18,280	390,278	3,848,182	360	69,700	669,013	132	.....	5,560	.....	57,070,850	64,603,904	1899
1900	14,559,127	22,362,730	16,195,675	4,324,484	62,259	317,385	4,874,392	200	74,714	836,039	[1]1,602	6,472	5,450	.....	63,620,529	75,989,313	1900
1901	13,831,996	21,648,083	14,177,126	8,786,330	137,259	460,520	5,757,086	250	179,151	4,393,658	[2]2,335	10,000	5,400	.....	69,389,194	66,417,335	1901
1902	13,183,610	21,014,231	13,513,345	13,984,268	185,331	396,901	7,480,896	200	331,749	18,083,658	[2]757	37,100	6,253	548,617	88,766,916	71,178,910	1902
1903	12,518,134	20,480,286	12,899,395	24,382,372	554,286	483,925	9,186,411	.....	932,214	17,955,572	[3]3,000	138,911	8,960	917,771	100,461,337	94,694,050	1903
1904	12,239,026	18,876,631	12,644,686	29,649,434	998,284	501,763	11,339,124	.....	4,250,779	22,241,413	[2]2,572	1,366,748	11,542	2,958,958	117,080,960	101,175,455	1904
1905	11,554,777	16,346,660	11,578,110	33,427,473	1,217,337	376,238	10,964,247	181,084	[2]12,013,495	28,136,189	[3]3,100	([4])	8,454	8,910,416	134,717,580	34,157,399	1905
1906	11,500,410	14,787,763	10,120,935	33,098,598	1,213,548	327,582	7,673,477	4,397,050	[2]21,718,648	12,567,897	[3]3,500	([3])	[4]7,000	9,077,528	126,493,936	92,444,735	1906
1907	11,211,606	12,207,448	9,095,296	39,748,375	820,844	331,851	5,128,037	24,281,973	2,409,521	12,322,696	[4]4,000	43,524,128	[5]9,339	5,000,221	166,095,335	120,106,749	1907
1908	10,584,453	10,858,797	9,523,176	44,854,737	[6]727,767	379,653	3,283,629	33,686,238	1,801,781	11,206,464	[3]15,246	45,798,765	[5]17,775	5,788,874	178,527,355	129,079,184	1908
1909	10,434,300	10,632,793	10,745,092	55,471,601	[6]639,016	310,861	2,296,086	30,898,339	1,263,764	9,534,467	[3]5,750	47,859,218	[5]20,056	3,059,531	183,170,874	128,328,487	1909
1910	9,848,300	9,916,370	11,753,071	73,010,560	[6]468,774	239,794	2,159,725	33,143,362	1,128,668	8,899,266	[3]3,615	52,028,718	[5]115,430	6,841,395	209,557,248	127,899,688	1910
1911	9,200,673	8,817,112	9,795,464	81,134,391	[6]472,458	226,926	1,695,289	31,317,038	1,278,819	9,526,474	[7]7,995	56,069,637	[5]186,695	10,720,420	220,449,391	134,044,752	1911
1912	8,712,076	[8]8,969,007	12,128,962	[7]87,272,593	[6]848,368	206,052	970,009	28,601,308	1,592,796	11,735,057	([3])	51,427,071	1,572,306	9,263,439	222,935,044	164,213,247	1912
1913	8,865,493	8,781,468	11,567,299	97,788,525	[6]524,568	188,568	956,095	23,893,899	2,375,029	15,009,478	[9]10,843	63,579,384	2,406,522	12,498,828	248,446,230	237,121,388	1913
1914	9,109,309	8,536,352	9,680,033	99,775,327	[6]502,441	222,773	1,335,456	21,919,749	3,103,585	20,068,184	[10]7,792	73,631,724	3,560,375	14,309,435	265,762,535	214,125,215	1914
1915	8,726,483	7,825,326	9,264,798	86,591,535	[6]437,274	208,475	875,758	19,041,695	2,823,487	24,942,701	[10]14,265	97,915,243	4,245,325	18,191,539	281,104,104	179,462,890	1915
1916	8,466,481	7,744,511	8,731,184	90,951,936	1,203,246	197,235	769,036	17,714,235	8,738,077	27,644,605	.....	107,071,715	6,234,137	15,248,138	300,767,158	330,899,868	1916
1917	8,612,885	7,750,540	8,379,285	93,877,549	3,100,356	121,231	759,432	15,776,860	36,536,125	32,413,287	.....	107,507,471	8,978,680	11,392,201	*335,315,601	522,635,213	1917
1918	8,216,655	7,285,005	7,866,628	97,531,997	4,376,342	143,286	877,558	13,365,974	45,451,017	38,750,031	.....	103,347,070	12,596,287	16,042,600	*355,927,716	703,943,961	1918
1919	9,441,936	8,243,592	9,032,688	101,221,784	5,027,904	241,680	929,780	12,436,000	34,769,100	85,312,000	.....	81,127,900	13,342,320	16,250,000	377,719,000	867,753,379	1919
1920	8,360,400	7,412,000	8,173,050	105,668,000	8,692,600	110,000	932,000	10,772,000	38,500,000	96,000,000	.....	105,725,000	17,407,000	35,649,000	443,402,000	1,360,000,000	1920
1921	8,414,000	7,333,000	8,003,000	114,709,000	8,963,000	108,200	1,163,000	10,044,000	36,232,000	103,322,000	.....	113,978,000	20,656,800	26,523,000	469,639,000	753,000,000	1921
1922	8,505,000	6,775,000	7,015,000	138,907,000	9,603,000	96,500	1,089,000	9,409,000	31,891,000	117,106,545	.....	147,414,000	29,177,265	33,889,480	556,207,725	.....	1922
Total	822,924,053	493,130,978	326,698,398	1,570,732,360	50,489,692	11,875,750	110,219,364	340,886,380	390,114,398	625,968,550	86,977	1,319,565,357	120,602,958	263,081,391	6,555,539,444	.....	

Arkansas 1921	10,190,000
Arkansas 1922	15,869,635
Total	26,059,635

[1]Includes Alaska, Michigan and Missouri production, estimated at 10,300 barrels in 1917 and 7,943 barrels in 1918. [2]Includes production of Michigan. [3]Includes production of Oklahoma. [4]Included with Kansas. [5]Estimated. [6]Includes production of Utah.—[7]No. production in Tennessee recorded. [8]Includes small production in Alaska. [9]No production in Missouri; Michigan included in Ohio. [10]Includes production of Alaska, Michigan and New Mexico. *Includes production of Alaska and Michigan. Figures from United States Geological Survey, Department of Interior.



Steel on Steel

For ease in running
For greater strength
For lasting use with long life
For most power with least effort

PARKERSBURG *Improved* Steel Crown Blocks

THEY are the *sensible* crown blocks for you to buy. There's no grinding of iron on wood, with unnecessary friction and creation of heat and fire.

Parkersburg Steel Crown Blocks run smoothly, easily—little friction, much power. Pulley trunnions run in babbitted cast iron bearings. Every development is the last word in crown block perfection.

5, 6 and 7 SHEAVE

Ask for Bulletin C. B.

The PARKERSBURG RIG & REEL COMPANY

MAIN OFFICE AND WORKS: Parkersburg, West Virginia
NEW YORK OFFICE: 30 Church Street, Room 1510

California Representatives: BUCK & STODDARD 485 California Street, San Francisco, Calif. 215 West Seventh Street, Los Angeles, Calif.

District Offices and Distributing Warehouses from which Parkersburg Service is Available

TEXAS
Houston
Breckenridge
Cross Plains
Graham
Iowa Park
Mexia
Orange
Ranger
Wichita Falls

LOUISIANA
Shreveport
Haynesville
Couchwood

WYOMING
Casper
Riverton
Osage

KENTUCKY
Bowling Green
Burkesville
Scottsville
Whitesville

W. VIRGINIA
Parkersburg
Clarksburg

MONTANA
Winnett
Kevin
Sunburst

KANSAS
Eldorado
Peabody
Florence
Virgil

ARKANSAS
El Dorado

OKLAHOMA
Tulsa
Bristow
Burbank
Drumright
Duncan
Henryetta
Wilson
Hominy
Okemah
Okmulgee
Pawhuska
Slick
Tonkawa
Barnsdall
Shidler

*Includes Alaska, Michigan and Missouri production, estimated. †Includes small production in Tennessee recorded. ‡Includes production of Utah. §No production recorded. ¶Includes small production of Kansas. **Estimated. ††Includes production of Alaska and Michigan. Figures from United States Geological Survey, Department of Interior.

Total Production of Crude Oil in California

From the Beginning of the Industry to December 31, 1921, by Fields—in Barrels (42 U. S. Gallons)

Note.—The production figures in the tabulation below give the crude oil production of each field for each year since the beginning of the industry in the State. It is a history in figures of California's crude oil production and field development

Year	Kern River	McKittrick	Midway	Sunset	Coalinga	Santa Maria-Lompoc	Summerland	Newhall and Ventura Co.	Los Angeles and Salt Lake	Whittier-Fullerton	Lost Hills-Belridge	Miscellaneous	Total
Prior	.....	.....	.....	.....	.....	.....	.....	175,000	.....	.....	.....	.....	175,000
1876	.....	.....	.....	.....	.....	.....	.....	12,000	.....	.....	.....	.....	12,000
77	.....	.....	.....	.....	.....	.....	.....	13,000	.....	.....	.....	.....	13,000
78	.....	.....	.....	.....	.....	.....	.....	15,227	.....	.....	.....	.....	15,227
79	.....	.....	.....	.....	.....	.....	.....	19,858	.....	.....	.....	.....	19,858
1880	.....	.....	.....	.....	.....	.....	.....	40,552	.....	.....	.....	.....	40,552
								99,862	.....	.....	.....	.....	99,862
81	.....	.....	.....	.....	.....	.....	.....	128,636	.....	.....	.....	.....	128,636
82	.....	.....	.....	.....	.....	.....	.....	142,857	.....	.....	.....	.....	142,857
83	.....	.....	.....	.....	.....	.....	.....	262,000	.....	.....	.....	.....	262,000
84	.....	.....	.....	.....	.....	.....	.....	325,000	.....	.....	.....	.....	325,000
85	.....	.....	.....	.....	.....	.....	.....	377,145	.....	.....	.....	.....	377,145
86	.....	.....	.....	.....	.....	.....	.....	678,572	.....	.....	.....	.....	678,572
87	.....	.....	.....	.....	.....	.....	.....	690,333	.....	.....	.....	.....	690,333
88	.....	.....	.....	.....	.....	.....	.....	303,220	.....	.....	.....	.....	303,220
89	.....	.....	.....	.....	.....	.....	.....	307,360	.....	.....	.....	.....	307,360
1890	.....	.....	.....	.....	*	.....	*	323,600	.....	.....	.....	.....	323,600
91	.....	.....	.....	*	.....	.....	.....	385,049	.....	.....	.....	.....	385,049
92	.....	*	.....	.....	.....	.....	.....	470,179	.....	.....	.....	.....	470,179
93	.....	.....	.....	.....	.....	.....	.....	524,469	257,109	.....	.....	.....	783,078
94	.....	.....	.....	.....	.....	.....	1,500	476,490	751,945	.....	.....	.....	1,245,339
95	.....	.....	.....	.....	.....	.....	16,904	298,866	905,003	.....	.....	.....	1,257,780
96	.....	.....	.....	.....	14,119	.....	39,792	368,282	1,327,011	12,000	.....	4,000	1,911,569
97	.....	.....	.....	.....	70,140	.....	130,136	427,000	1,462,871	60,000	.....	3,000	2,249,088
98	.....	10,000	.....	.....	154,000	.....	132,217	496,200	1,409,356	108,077	.....	1,500	2,677,875
99	*	15,000	.....	.....	439,372	.....	208,370	443,000	1,722,887	254,397	.....	248,945	4,319,950
1900	826,775	80,000	*	12,500	547,960	.....	183,486	472,057	2,304,432	302,652	.....	.....	7,710,315
01	3,278,840	430,450	4,235	188,600	525,433	*	203,616	475,000	2,198,496	1,103,793	.....	.....	14,356,910
02	8,988,846	619,296	3,048	167,558	571,233	86,888	143,552	682,185	793,765	2,305,613	.....	3,670	24,334,481
03	16,342,099	1,353,206	27,305	352,565	2,138,058	204,890	131,125	650,779	1,241,304	2,224,550	.....	39,392	29,548,634
04	17,226,240	1,856,225	910	390,425	5,097,853	700,450	120,506	476,898	2,226,768	2,118,312	.....	29,650	34,298,041
05	15,253,845	1,373,030	18,530	419,212	8,882,125	3,402,800	96,871	404,379	2,675,650	2,434,512	.....	10,090	32,623,229
06	12,825,166	680,756	11,800	307,550	8,401,105	4,799,411	72,810	435,584	3,372,465	3,294,206	.....	69,090	40,102,512
07	12,346,014	2,415,840	149,944	704,805	8,996,268	8,249,236	69,060	498,015	5,138,959	4,273,314	.....	125,475	48,306,737
08	13,803,579	3,076,300	434,578	1,463,510	10,725,795	8,699,350	67,862	516,628	4,350,898	5,157,252	.....	126,775	58,191,723
09	14,508,242	5,807,360	2,234,455	1,999,701	15,406,619	8,017,455	66,338	652,575	3,729,618	6,281,221	4,900	58,970	77,697,568
1910	14,776,435	5,471,613	11,174,207	9,218,904	18,646,570	7,607,830	74,725	661,785	3,223,661	7,081,165	168,410	61,350	83,744,044
11	14,078,890	5,477,532	21,584,602	5,559,069	18,311,251	7,465,074	71,255	859,885	3,073,427	7,919,779	2,680,961	45,870	90,074,439
12	12,446,445	5,094,465	25,948,980	5,590,824	19,546,122	6,804,966	65,715	1,022,052	2,898,846	10,657,053	5,274,553	27,375	97,867,184
13	9,980,940	4,496,842	33,040,129	5,984,651	18,604,626	5,817,711	62,406	946,421	2,594,475	14,130,548	4,830,921	27,375	103,623,695
14	7,030,545	3,420,857	37,479,228	12,546,615	15,925,867	4,303,080	55,743	1,036,305	2,110,133	13,030,549	4,318,550	27,375	89,566,779
15	8,034,974	3,552,801	33,311,486	6,006,607	13,548,159	4,536,840	53,000	1,122,033	1,721,453	14,679 672	4,852,431	27,450	91,822,362
16	8,402,525	3,230,644	32,156,818	6,768,658	14,381,493	4,422,410	56,775	1,186,407	1,501,799	18,155,440	6,295,329	27,375	97,267,832
17	8,495,610	3,252,544	29,487,812	7,072,333	15,938,543	5,789,070	56,570	1,386,518	1,397,781	24,903,613	5,420,079	27,375	101,637,870
18	7,921,515	3,050,627	27,439,993	6,608,940	16,283,066	7,143,750	54 613	1,792,463	1,341,415	28,657,683	4,554,821	27,375	101.221.784
19	7,563,025	2,810,848	26,414,067	5,589,885	16,885,610	6,030.916	53,680	2,122,449	1,311,264	28,694,163	4,139,767	25,610	105,721,186
1920	7,456,515	2,607,240	32,493,229	5,423,781	15,464,198	5,928,060	54,910	2,375,479	1,344,926	34,242,566	3,261,281	24,035	114,849,924
21	6,715,680	2,056,101	42,257,775	4,613,965	12,340,637	5,563,324	54,155	28,874,428	56,186,458	232,899,351	45,802,003	1,090,088	1,463,781,378
Totals	228,301,945	62,639,577	355,673,131	86,990,658	257,346,242	105,586,805	2,390,692						

CALIFORNIA SUMMARY FOR 1922

Figures from January to July are taken from Standard Oil Bulletin, while American Petroleum Institute figures from August to November are used. December statistics are not yet available. The Institute made certain changes in method of compiling figures starting with August, not permitting full comparisons.

KERN RIVER

Month—	Wells Drilling	Wells Completions	Wells Abn.	Producing
January	23	3	..	2222
February	18	..	2	2218
March	16	3	..	2218
April	13	4	..	2230
May	17	1	..	2234
June	20	3	..	2259
July	13	5	..	2245
August	1	3	4	2182
September	..	2	..	2162
October	1	..	..	2158
November	..	..	..	2159

McKITTRICK

January	8	1	..	347
February	8	..	2	350
March	8	..	..	349
April	9	1	..	346
May	9	..	..	347
June	6	2	2	345
July	7	..	..	334
August	5	..	..	285
September	6	..	..	287
October	6	..	..	281
November	8	..	..	281

MIDWAY-SUNSET

January	84	26	2	2699
February	98	19	..	2640
March	101	16	..	2637
April	115	16	7	2651
May	113	26	2	2657
June	118	21	2	2648
July	105	32	..	2602

CALIFORNIA BY MONTHS

Production and Stocks

	Stocks end of month	Total Production
January	36,184,527	9,753,000
February	36,701,810	9,077,000
March	37,991,694	10,298,000
April	39,795,057	10,209,000
May	42,041,461	11,112,000
June	43,477,237	10,695,000
July	45,187,910	11,591,000
August	**51,692,290	11,849,000
September	54,272,194	12,205,000
October	56,259,301	13,419,000
November	57,569,832	*14,036,000
December	.....	*14,633,000
Total 1922		138,907,000
Total 1921		114,709,000

*Subject to revision.

**Starting with August refinery stocks of crude, residuum and tops are included.

MIDWAY-SUNSET

Month—	Wells Drilling	Wells Completions	Wells Abn.	Producing
August	73	16	2	2207
September	57	18	2	2175
October	56	11	3	2149
November	56	11	6	2146

LOST HILLS-BELRIDGE

January	8	3	..	586
February	8	..	..	490
March	11	..	..	490
April	11	..	..	469
May	9	..	2	485
June	8	1	..	486
July	6	..	..	479
August	5	..	..	483
September	5	..	..	413
October	3	..	..	413
November	5	..	..	413

COALINGA

January	13	..	2	1182
February	14	1	..	1224
March	13	2	2	1191
April	16	1	2	1260
May	14	1	..	1140
June	22	..	..	1014
July	11	2	..	842
August	15	1	..	700
September	10	3	3	725
October	9	..	..	730
November	10	..	..	699

The Measure of Their Worth

There are only six different Dunn Tools built for oil country work, but in each of them you will find embodied in the maximum degree those features which justify the production and widespread use of any device or appliance in this class of service.

Safety—to materially reduce, or eliminate, the hazard to life and property.

Speed—to speed up and increase the output of workmen and equipment.

Efficiency—to lower the cost of existing methods of operation to an appreciable extent.

1. Tongs
2. Casing Elevators
3. Tubing Elevators
4. Sucker-Rod Elevators
5. Floor-Circle Braces
6. Tubing Catchers

Carried in stock by leading supply houses everywhere

DUNN MANUFACTURING COMPANY

Office and Works: Oxnard, California, U. S. A.

Cable Address: "Dunoiltool" Oxnard, California

All Standard Codes

Correspondence In All Languages

OIL WELL DUNN TOOLS

Oil wells among the orange trees at Montebello, California

LOMPOC AND SANTA MARIA

Month—	Wells Drilling	Comple-tions	Abn.	Pro-ducing
January	11	..	..	416
February	9	1	..	416
March	8	..	..	417
April	9	..	..	418
May	11	..	..	323
June	10	..	3	314
July	10	2	..	302

VENTURA COUNTY-NEWHALL

January	39	3	2	533
February	41	1	..	534
March	45	5	..	530
April	49	2	..	542
May	52	1	..	541
June	51	5	..	543
July	50	1	..	499
August	41	2	3	561
September	44	5	1	564
October	42	5	1	547
November	42	1	1	550

LOS ANGELES-SALT LAKE

January	6	1	..	673
February	5	1	..	674
March	2	2	..	675
April	2	1	..	677
May	2	..	..	677
June	2	..	..	676
July	2	..	..	676
August	2	..	..	673
September	2	..	..	673
October	1	..	1	673
November	..	1	..	673

WHITTIER-FULLERTON

January	129	5	1	1113
February	131	11	..	1114
March	127	12	..	1125
April	139	5	..	1129
May	155	7	..	1136
June	166	10	..	1080
July	172	18	2	1088

HUNTINGTON BEACH

January	151	17	..	66
February	167	11	..	79
March	171	18	..	88
April	188	19	..	101
May	189	30	..	124
June	199	26	..	150
July	212	40	..	157

SUMMERLAND

Month—	Wells Drilling	Comple-tions	Abn.	Pro-ducing
January	..	..	..	137
February	..	..	..	137
March	..	..	..	137
April	..	..	..	137
May	..	..	..	137
June	..	..	..	137
July	..	..	..	137
August	..	..	..	135
September	..	..	..	135
October	..	..	..	135
November	..	..	..	135

WATSONVILLE AND MISCELLANEOUS

January	65	..	..	9
February	58	..	..	9
March	61	..	..	9
April	59	..	..	9
May	57	..	..	9
June	51	..	..	9
July	61	..	..	9

ELK HILLS

August	19	18	1	110
September	14	6	..	91
October	12	3	..	86
November	10	5	1	92

SANTA MARIA

August	9	..	..	331
September	10	..	4	322
October	8	..	..	322
November	10	..	1	322

WHITTIER

August	5	..	..	174
September	5	..	..	175
October	5	..	..	175
November	4	..	..	174

FULLERTON

August	8	..	..	375
September	9	..	..	375
October	10	..	..	375
November	10	..	..	375

COYOTE

August	5	..	..	231
September	7	..	1	230
October	7	..	1	231
November	7	..	..	231

SANTA FE SPRINGS

Month—	Wells Drilling	Comple-tions	Abn.	Pro-ducing
August	104	10	1	25
September	111	18	..	45
October	109	20	2	58
November	124	16	3	70

MONTEBELLO

August	21	2	..	152
September	21	1	..	152
October	18	3	..	113
November	14	1	1	117

RICHFIELD

August	32	3	1	153
September	27	5	..	159
October	24	4	1	162
November	20	3	1	164

HUNTINGTON-NEWPORT

August	103	13	2	136
September	102	11	3	141
October	86	16	1	155
November	90	15	1	157

LONG BEACH

August	98	18	2	82
September	111	26	1	103
October	129	18	1	115
November	157	18	3	127

REDONDO

August	8	..	..	3
September	12	2	..	5
October	10	4	..	10
November	14	..	..	8

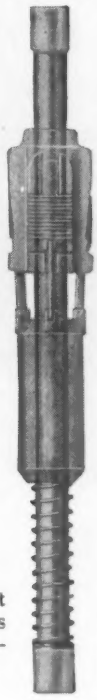
WATSONVILLE

August	..	..	..	8
September	..	..	..	8
October	..	..	..	8
November	..	..	..	8

MISCELLANEOUS

August	58	..	3	....
September	59	..	1	....
October	57	..	5	....
November	54	..	4	....

An Unbroken Tubing Runs Clear Through



This tubing is of highest grade, and is capped at its ends with best forged seamless steel couplings.

No joint of your tubing could be stronger than this tubing catcher which constitutes one short joint.

This Dovetail Insures Accuracy of Operation

It preserves the alignment of teeth of all three slips in true circles, for maximum traction on casing.

It prevents slip from flying out and catching ends of casing at each collar as tubing is pulled.

In almost universal use. Fully patented. At all supply houses.

THE GUIBERSON CORPORATION

Box 1106, Dallas, Texas.

CALIFORNIA BRANCH:
1737 E. 7th St.,
Los Angeles, Cal.

GUIBERSON

314 New Daniels Bldg., Tulsa.
825 Mason Bldg., Houston, Texas.
506 Trust Bldg., Newark, O.

EASTERN STATES SUMMARY FOR 1922

ILLINOIS

	Barrels
January	924,000
February	715,000
March	878,000
April	677,000
May	830,000
June	791,000
July	768,000
August	809,000
September	751,000
October	768,000
November	728,000
December	*770,000
Totals 1922	9,409,000
Totals 1921	10,044,000

*Estimated.

NEW YORK

	Barrels
January	77,000
February	73,000
March	80,000
April	78,000
May	95,000
June	85,000
July	85,000
August	83,000
September	94,000
October	85,000
November	85,000
December	*90,000
Totals 1922	1,010,000
Totals 1921	970,000

*Estimated.

ILLINOIS

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	32	20	1	11	163
February	22	15	...	7	193
March	28	23	5	...	240
April	25	20	...	5	691
May	27	16	...	11	390
June	52	44	...	8	750
July	33	25	...	8	1,514
August	43	42	...	1	2,858
Sept.	52	38	...	14	1,177
October	24	21	1	2	818
Nov.	25	18	2	5	962
Dec.	33	25	...	8	1,383
Totals 1922	396	307	9	80	11,139
Totals 1921	275	165	4	105	4,575

PENNSYLVANIA

January	541,000
February	559,000
March	630,000
April	598,000
May	661,000
June	639,000
July	622,000
August	669,000
September	630,000
October	664,000
November	632,000
December	*650,000
Totals 1922	7,495,000
Totals 1921	7,444,000

*Estimated.

OHIO

January	511,000
February	518,000
March	585,000
April	538,000
May	602,000
June	588,000
July	563,000
August	597,000
September	564,000
October	591,000
November	552,000
December	*566,000
Totals 1922	6,775,000
Totals 1921	7,333,000

*Estimated.

PENNSYLVANIA

January	182	151	18	13	337
February	294	214	35	45	910
March	195	155	17	23	358
April	48	29	15	4	407
May	58	32	21	5	171
June	308	265	20	23	1,223
July	77	50	17	10	2,743
August	64	50	6	8	2,437
Sept.	129	81	30	18	1,723
October	148	96	33	19	1,821
Nov.	77	51	19	7	2,643
Dec.	74	44	19	11	1,631
Totals 1922	1654	1218	250	186	16,404
Totals 1921	4122	2741	606	775	20,175

TENNESSEE

January	1,000
February	600
March	1,200
April	800
May	1,000
June	900
July	300
August	600
September	1,000
October	800
November	800
December	*1,000
Totals 1922	10,000
Totals 1921	12,700

*Estimated.

WEST VIRGINIA

January	549,000
February	565,000
March	648,000
April	593,000
May	549,000
June	703,000
July	566,000
August	607,000
September	558,000
October	567,000
November	543,000
December	*567,000
Totals 1922	7,015,000
Totals 1921	8,003,000

*Estimated

TENNESSEE

January	...	...	...	...	....
February	32	22	...	10	45
March	5	4	...	1	15
April	5	4	...	1	19
May	...	...	...	...	....
June	...	...	...	...	....
July	...	...	...	...	....
August	...	...	...	...	....
Sept.	3	2	...	1	10
October	...	...	...	...	....
Nov.	...	...	...	...	....
Dec.	2	1	...	1	10
Totals 1922.	47	33	...	14	99

KENTUCKY

January	700,000
February	706,400
March	779,800
April	742,200
May	802,000
June	763,100
July	782,700
August	792,400
September	746,000
October	763,200
November	725,200
December	*750,000
Total 1922	9,053,000
Totals 1921	8,679,900

*Estimated.

INDIANA

January	88,000
February	81,000
March	86,000
April	86,000
May	98,000
June	95,000
July	94,000
August	97,000
September	89,000
October	95,000
November	90,000
December	*90,300
Totals 1922	1,089,300
Totals 1921	1,163,000

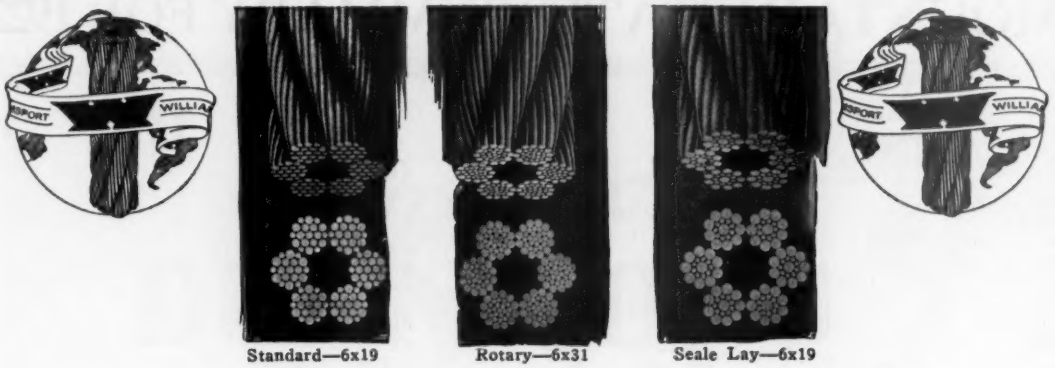
*Estimated.

KENTUCKY

January	192	176	3	13	2,710
February	206	173	7	26	3,342
March	218	180	...	38	2,700
April	246	181	6	59	8,028
May	158	132	11	15	5,706
June	185	149	1	35	4,845
July	173	147	2	24	4,115
August	177	134	5	38	4,101
Sept.	232	162	15	55	4,067
October	126	106	7	13	2,523
Nov.	213	161	4	48	2,665
Dec.	228	174	7	47	3,545
Totals 1922.	2354	1875	68	411	48,347
*Totals 1921	2513	1954	64	495	40,960

*Includes Tennessee.

(Continued on page 44)



Standard—6x19 Rotary—6x31 Seale Lay—6x19

Correct Selection Saves Time and Money

The RIGHT wire line must be selected, if you are to obtain maximum results at minimum expense. If your line is a "misfit" its use will mean loss of time and money.

WILLIAMSPORT have developed stock designs to meet EVERY oil industry requirement, of which three are shown here. We are also prepared to design new special lines for unusual needs.

SPECIAL ROTARY LINE. Attention is especially called to our 6x31 Rotary Line, an exclusive WILLIAMSPORT design, wonderfully flexible and now being used by the large majority of our rotary customers.

Our representatives know their business, and will be glad to advise you when you select your next line.

WILLIAMSPORT WIRE ROPE DISTRIBUTING COMPANY

Kennedy Bldg., Tulsa, Okla.

DISTRICT OFFICES

Houston Graham Shreveport Shidler Arkansas City Smackover Casper

OIL COUNTRY DISTRIBUTORS

Midland Supply Co., Pawhuska, Hominy, Okla., Eureka, Kansas.

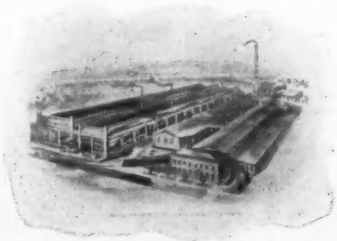
Atlas Supply Co., Muskogee, Okla., and all branch stores.

American Tool & Supply Co., Bristow, Okla.

Chadderdon-Nelson Tool & Supply Co., Slick, Okla.

Cushing Machine & Tool Co., Cushing, Okla.

Petroleum Supply Co., Houston and Mexia, Texas, Eldorado, Ark.



Factory: Williamsport, Pa.

Federal Supply Co., Electra and Mexia, Texas.

Sabine Supply Co., Orange, Texas.

Sehnert's, Inc., Haynesville, La.

Bovaird & Seyfang, Pittsburgh and Bradford, Pa.

Branchland Supply Co., Huntington, W. Va., **Paintsville, Ky.**

Dunham & Lawler, Los Angeles, Cal.

Montana Lumber & Hdw. Co., Lewistown and Winnett, Mont.

MOUNTAIN STATES SUMMARY FOR 1922

WYOMING

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	22	19	...	3	6,545
February	15	15	...	...	6,510
March	34	29	2	3	8,020
April	44	40	...	4	9,875
May	50	48	...	2	15,760
June	39	39	...	...	15,320
July	55	50	...	5	13,135
August	20	16	...	4	2,935
Sept.	74	70	...	4	35,110
October	65	61	...	4	22,200
Nov.	45	39	...	6	28,410
Dec.	30	25	...	5	23,555
Totals 1922	493	451	2	40	187,375
*Totals 1921	425	311	16	97	106,930

*Includes Montana.

MONTANA

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	10	7	...	3	655
February	2	1	...	1	....
March	4	3	...	1	410
April	4	3	...	1	310
May	4	2	...	2	....
June	6	5	...	1	1,820
July	7	6	...	1	1,210
August	2	1	...	1	....
Sept.	12	9	...	3	895
October	23	16	...	7	1,675
Nov.	6	6	...	...	630
Dec.	1	1	...	...	80
Totals 1922	81	60	...	21	7,685

WYOMING

	Barrels
January	1,639,500
February	1,480,000
March	1,859,400
April	2,007,200
May	2,262,000
June	2,274,400
July	2,214,400
August	2,146,800
September	2,191,500
October	2,605,300
November	3,113,400
December	*3,002,815
Totals 1922	26,796,265
Totals 1921	19,037,800

*Estimated.

MONTANA

	Barrels
January	144,000
February	126,000
March	159,000
April	149,000
May	144,000
June	188,000
July	222,000
August	258,000
September	251,000
October	254,000
November	241,000
December	*245,000
Totals 1922	2,381,000
Totals	1,436,000

*Estimated

COLORADO

	Barrels
January	7,500
February	7,400
March	7,600
April	7,800
May	9,000
June	9,600
July	7,600
August	8,200
September	8,500
October	8,700
November	7,600
December	*7,000
Total 1922	96,500
Totals 1921	108,200

*Estimated.

EASTERN STATES SUMMARY

(Continued from page 42.)

NEW YORK

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	10	8	1	1	14
February	20	16	3	1	15
March	17	11	1	5	12
April	5	4	...	1	11
May	9	9	...	...	61
June	29	23	2	4	583
July	15	13	1	1	205
August	12	10	...	2	47
Sept.	17	12	3	2	67
October	15	13	1	1	38
Nov.	11	10	...	1	54
Dec.	11	11	...	...	69
Totals 1922	171	140	12	19	1,176

OHIO

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	270	178	62	30	775
February	258	182	34	42	825
March	213	149	22	42	688
April	175	93	38	44	1,440
May	200	158	5	37	1,455
June	132	91	14	27	1,295
July	208	142	30	36	2,253
August	214	136	37	41	2,145
Sept.	268	151	32	85	2,257
October	255	127	77	51	4,536
Nov.	165	106	29	30	1,976
Dec.	289	141	79	69	2,829
Totals 1922	2647	1654	459	534	22,474
Totals 1921	1318	650	344	324	11,800

WEST VIRGINIA

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	106	69	22	15	372
February	121	78	24	19	440
March	111	74	19	18	865
April	168	63	56	49	906
May	93	44	28	21	661
June	108	72	16	20	320
July	116	56	35	25	1,895
August	154	62	58	34	582
Sept.	187	70	73	44	814
October	121	44	49	28	252
Nov.	107	49	33	25	608
Dec.	124	46	50	28	363
Totals 1922	1516	727	463	326	8,078

INDIANA

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	24	18	...	6	452
February	14	10	...	4	215
March	31	22	...	9	405
April	14	7	2	5	200
May	14	11	...	3	138
June	23	18	...	5	302
July	15	12	2	1	235
August	15	12	2	1	25
Sept.	25	20	...	5	212
October	18	14	1	3	122
Nov.	25	17	...	8	247
Dec.	27	20	1	6	227
Totals 1922	257	188	7	62	3,317
Totals 1921	321	222	9	90	5,870

Federal Survey of Probable Oil Lands

Washington, D. C.—Fifty thousand dollars has been added to the appropriation bill for the Interior Department for the fiscal year 1924 under an amendment adopted by the senate, providing that amount for surveys and resurveys of public lands deemed to be valuable for oil and oil shale.

The amendment was the work of Senator Phipps of Colorado, who explained that it is important that errors made in the original surveys be corrected without delay. "The resurveys are uecessary by reason of the fact that that territory was platted years ago under a contract system," explained the Senator, "where as a matter of fact the work was probably done in the office of the surveyor instead of on the ground itself, so that today when you go to look for corners and monuments or other land markings it is impossible to locate them. They do not exist. The probability is that they were never put in position on the property, although the land is supposed to have been surveyed.

"Now money is being expended, experimental plants are being erected on this property, and the owners who have expended their money in doing their assessment work year by year and have acquired their patents and are acquirirng them are not assured that they are working on the property which they hold, and they may find that they are as much as half a mile off the line of the property they should be working on."

THE NEW Type "XX" DUNN TONG

WEIGHT 350lbs.

Tongs without bushings take 10" size. With bushings take 8¼", 6¾", 5 3/16" and 4½" casing; 6" rotary tool joints, drill pipe and collars; and 4" rotary tool joints, drill pipe and collars.

A special 10-inch tong built to meet the particular requirements of heavy rotary drilling in deep territory.

"Standard of the World"

Dunn Tongs are in use in practically every operating oil field in the world and for years have been recognized as the fastest and safest tool of this type ever produced. It is not a new product, the succes of which is a matter of conjecture. Its supremacy is backed by years of unqualified success in all fields under all conditions of service.

Dunn Tongs are not cheap tools. They are high quality appliances embracing those features of mechanical perfection in design and construction absolutely essential to efficient, positive and safe operation—a finished product that is a master achievement of engineering and mechanical skill.

IN STOCK AT ALL ROTARY DISTRICT STORES OF

THE NATIONAL SUPPLY COMPANIES

The Burbank field of Osage County, Oklahoma, which developed

OKLAHOMA SUMMARY FOR 1922

JANUARY

	Completions	Producers	Gas wells	Failures	Initial Prod.
N. Okla.	98	84	1	13	17,990
S. Okla.	73	50	3	20	4,553
Old Fields	33	25	2	6	11,462
Okm'gee Sec.	73	38	11	24	10,635
Misc.	9	2	1	6	120
Totals 1922	286	199	18	69	44,760
Totals 1921	700	492	120	88	57,289

FEBRUARY

N. Okla.	83	66	8	9	21,124
S. Okla.	87	58	14	15	5,478
Old Fields	73	58	4	11	16,333
Okm'gee Sec.	87	51	15	21	31,781
Misc.	37	27	3	7	1,350
Totals 1922	367	260	44	63	76,066
Totals 1921	582	317	159	66	45,708

MARCH

N. Okla.	111	80	13	18	28,062
S. Okla.	74	51	13	10	3,200
Old Fields	76	66	1	9	35,135
Okm'gee Sec.	83	50	18	15	48,523
Misc.	40	29	6	5	2,000
Totals 1922	384	276	51	57	116,920
Totals 1921	405	239	48	118	37,769

APRIL

N. Okla.	168	136	9	23	44,864
S. Okla.	110	72	11	27	7,657
Old Fields	93	66	6	21	19,822
Okm'gee Sec.	155	96	11	48	74,664
Misc.	75	53	7	15	1,900
Totals 1922	601	423	44	134	148,907
Totals 1921	400	247	52	101	46,804

MAY

N. Okla.	130	105	10	15	41,704
S. Okla.	73	43	9	21	3,073
Old Fields	80	60	6	14	37,402
Okm'gee Sec.	138	83	17	38	20,475
Misc.	80	56	4	20	1,500
Totals 1922	501	347	46	108	104,154
Totals 1921	317	196	38	83	59,537

JUNE

N. Okla.	147	121	9	17	43,587
S. Okla.	79	52	13	14	4,023
Old Fields	101	65	9	27	42,272
Okm'gee Sec.	147	82	15	50	20,082
Misc.	68	44	4	20	2,000
Totals 1922	542	364	50	128	111,964
Totals 1921	401	252	47	102	44,987

OKLAHOMA

	Barrels
January	9,991,000
February	10,457,000
March	11,958,000
April	12,024,000
May	12,968,000
June	12,930,000
July	13,335,000
August	12,868,000
September	12,286,000
October	12,647,000
November	12,441,000
December	*13,509,000
Total 1922	147,414,000
Totals 1921	111,256,160

*Estimated.

BY MONTHS

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	286	199	18	69	44,760
February	367	260	44	63	76,066
March	384	276	51	57	116,920
April	601	423	44	134	148,907
May	501	347	46	108	104,154
June	542	364	50	128	111,964
July	593	416	54	123	122,455
August	488	316	52	120	54,650
September	534	338	57	139	91,835
October	395	217	59	119	92,250
November	326	157	56	113	46,095
December	411	227	67	117	77,090
Totals 1922	5,428	3,540	598	1,290	1,087,146
Totals 1921	4,335	2,651	676	1,008	510,817

BY DISTRICTS

N. Okla.	1,578	1,254	108	216	452,177
S. Okla.	989	603	128	258	56,803
Old Fields	1,141	777	78	286	329,086
Okmulgee District	1,289	628	242	419	236,165
Miscel.	431	278	42	111	12,915
Totals '22	5,428	3,540	598	1,290	1,087,146
Totals '21	4,335	2,651	676	1,008	510,817

JULY

N. Okla.	166	150	4	12	46,051
S. Okla.	99	55	11	33	7,704
Old Fields	120	89	9	22	51,335
Okm'gee Sec.	133	72	20	41	14,465
Misc.	75	50	10	15	2,900
Totals 1922	593	416	54	123	122,455
Totals 1921	388	224	45	119	53,241

AUGUST

	Completions	Producers	Gas wells	Failures	Initial Prod.
N. Okla.	162	128	10	24	29,105
S. Okla.	79	50	10	19	4,470
Old Fields	114	77	6	31	15,770
Okm'gee Sec.	113	46	24	43	4,705
Misc.	20	15	2	3	600
Totals 1922	488	316	52	120	54,650
Totals 1921	239	150	26	63	44,764

SEPTEMBER

N. Okla.	182	136	10	36	51,810
S. Okla.	105	68	7	30	5,140
Old Fields	123	89	9	25	30,220
Okm'gee Sec.	112	44	30	38	4,620
Misc.	12	1	1	10	45
Totals 1922	534	338	57	139	91,835
Totals 1921	230	121	35	74	28,017

OCTOBER

N. Okla.	120	91	13	16	54,875
S. Okla.	66	37	11	18	4,555
Old Fields	115	62	9	44	30,075
Okm'gee Sec.	88	27	25	36	2,745
Misc.	6	..	1	5	...
Totals 1922	395	217	59	119	92,250
Totals 1921	243	143	24	76	32,301

NOVEMBER

N. Okla.	92	66	10	16	26,470
S. Okla.	60	23	12	25	3,620
Old Fields	92	48	6	38	13,590
Okm'gee Sec.	75	19	25	31	1,915
Misc.	7	1	3	3	500
Totals 1922	326	157	56	113	46,095
Totals 1921	214	126	37	51	21,947

DECEMBER

N. Okla.	119	91	11	17	46,535
S. Okla.	84	44	14	26	3,330
Okla. Old Fields	121	72	11	38	25,670
Okmulgee District	85	20	31	34	1,555
Misc.	2	..	..	2	.....
Totals '22	411	227	67	117	77,090
Totals 1921	256	144	45	67	39,455

into one of the wonder fields of the state during 1922.

KANSAS SUMMARY FOR 1922

NORTH OKLAHOMA

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	98	84	1	13	17,990
February	83	66	8	9	21,124
March	111	80	13	18	28,062
April	168	136	9	23	44,864
May	130	105	10	15	41,704
June	147	121	9	17	43,587
July	166	150	4	12	46,051
August	162	128	10	24	29,105
Sept.	182	136	10	36	51,810
October	120	91	13	16	54,875
Nov.	92	66	10	16	26,470
Dec.	119	91	11	17	46,535
Totals 1922	1578	1254	108	216	452,177
Totals 1921	1084	717	206	161	125,483

SOUTH OKLAHOMA

January	73	50	3	20	4,553
February	87	58	14	15	5,478
March	74	51	13	10	3,200
April	110	72	11	27	7,657
May	73	43	9	21	3,073
June	79	52	13	14	4,023
July	99	55	11	33	7,704
August	79	50	10	19	4,470
Sept.	105	68	7	30	5,140
October	66	37	11	18	4,555
Nov.	60	23	12	25	3,620
Dec.	84	44	14	26	3,330
Totals 1922	989	603	128	258	56,803
Totals 1921	1227	786	179	262	170,063

OKLAHOMA OLD FIELDS

January	33	25	2	6	11,462
February	73	58	4	11	16,333
March	76	66	1	9	35,135
April	93	66	6	21	19,822
May	80	60	6	14	37,402
June	101	65	9	27	42,272
July	120	89	9	22	51,335
August	114	77	6	31	15,770
Sept.	123	89	9	25	30,220
October	115	62	9	44	30,075
Nov.	92	48	6	38	13,590
Dec.	121	72	11	38	25,670
Totals 1922	1141	777	78	286	329,086
Totals 1921	858	575	83	200	95,273

OKMULGEE SECTION

January	73	38	11	24	10,635
February	87	51	15	21	31,781
March	83	50	18	15	48,523
April	155	96	11	48	74,664
May	138	83	17	38	20,475
June	147	82	15	50	20,082
July	133	72	20	41	14,465
August	113	46	24	43	4,705
Sept.	112	44	30	38	4,620
October	88	27	25	36	2,745
Nov.	75	19	25	31	1,915
Dec.	85	20	31	34	1,555
Totals 1922	1289	628	242	419	236,165
Totals 1921	1005	499	184	322	115,515

KANSAS PRODUCTION

	Barrels
January	2,683,000
February	2,457,000
March	2,748,000
April	2,618,000
May	2,778,000
June	2,787,000
July	2,609,000
August	2,734,000
September	2,605,000
October	2,614,000
November	2,529,000
December	*2,729,000
Totals 1922	31,891,000
Totals 1921	34,312,586

*Estimated.

KANSAS FIELDS

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	121	84	..	37	4,625
February	77	65	..	12	3,765
March	75	56	5	14	3,950
April	102	60	5	37	5,005
May	110	72	6	32	7,956
June	114	71	4	39	6,380
July	89	50	5	34	7,861
August	70	43	1	26	4,890
Sept.	103	61	3	39	4,935
October	58	29	1	28	3,830
Nov.	58	30	1	27	3,590
December	70	36	..	34	1,595
Totals 1922	1047	657	31	359	58,382
Totals 1921	962	632	65	265	95,016

MISCELLANEOUS

January	9	2	1	6	120
February	37	27	3	7	1,350
March	40	29	6	5	2,000
April	75	53	7	15	1,900
May	80	56	4	20	1,500
June	68	44	4	20	2,000
July	75	50	10	15	2,900
August	20	15	2	3	600
Sept.	12	1	1	10	45
October	6	..	1	5	...
Nov.	7	1	3	3	500
Dec.	2	...	...	2	....
Totals 1922	431	278	42	111	12,915
Totals 1921	161	74	24	63	4,483

BUTLER COUNTY

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	23	19	..	4	2,640
February	12	10	..	2	1,620
March	24	21	..	3	1,725
April	19	13	..	6	2,040
May	28	18	..	10	3,420
June	26	20	..	6	2,925
July	30	19	..	11	5,860
August	21	17	..	4	2,440
Sept.	35	22	..	13	3,095
Oct.	23	11	..	12	2,335
Nov.	31	18	..	13	2,625
December	33	17	...	16	1,145
Totals 1922	305	205	...	100	31,870
Totals 1921	237	167	10	60	21,995

COWLEY COUNTY

January	..	..	..	..	...
February	..	..	..	..	...
March	1	..	..	1	...
April	..	..	..	..	...
May	2	1	..	1	75
June	5	..	..	5	...
July	1	1	..	..	7
August	6	1	..	5	25
Sept.	2	1	..	1	25
Oct.	4	1	..	3	60
Nov.	3	..	..	3	...
December	9	2	...	7	200
Totals 1922	33	7	...	26	392
Totals 1921	14	3	2	9	215

ELK COUNTY

January	1	1	..	..	15
February	2	1	..	1	20
March	..	..	..	..	...
April	3	3	..	..	55
May	4	4	..	..	135
June	3	3	..	..	40
July	4	2	..	2	50
August	4	..	1	3	...
Sept.	5	..	2	3	...
October	1	..	..	1	...
Nov.	..	..	..	..	...
Dec.	1	...	...	1	....
Totals 1922	28	14	3	11	315
Totals 1921	56	23	9	24	1,360

(Continued on page 48)

ARKANSAS SUMMARY FOR 1922

ARKANSAS PRODUCTION

Month—	El Dorado	Smackover	Stephens Dist.	Calion	Total for state
January	1,284,560	.....	.....	.....	1,284,560
February	1,058,925	.....	.....	.....	1,058,925
March	1,048,690	.....	.....	.....	1,048,690
April	1,134,700	.....	.....	.....	1,134,700
May	1,115,400	.....	.....	.....	1,115,400
June	1,067,065	.....	.....	.....	1,067,065
July	997,270	.....	.....	.....	997,270
August	963,170	.....	.....	.....	963,170
September	860,880	125,280	.....	.....	986,160
October	827,420	213,620	.....	.....	1,041,040
November	734,120	1,142,670	7,320	51,720	1,935,830
December	697,715	2,442,155	6,790	90,165	3,236,825
Totals 1922	11,789,915	3,923,725	14,110	141,885	15,869,635
Totals 1921	10,645,415	.....	.....	.....	10,645,415

JANUARY

	Completions	Producers	Gas wells	Failures	Initial Prod.
El Dorado	67	62	..	5	24,085
Wildcats	3	..	..	3	...
Totals 1922.	70	62	..	7	24,085
Totals 1921 ..	3	3	..	..	7,025

FEBRUARY

	Completions	Producers	Gas wells	Failures	Initial Prod.
El Dorado	78	76	..	2	21,135
Wildcats	2	..	..	2	.....
Totals 1922.	80	76	..	4	21,135
Totals 1921 ..	5	5	..	..	4,725

KANSAS SUMMARY

(Continued from page 47.)

GREENWOOD COUNTY

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	10	7	..	3	310
February	13	10	..	3	380
March	14	10	..	4	800
April	21	12	..	9	565
May	24	18	..	6	1,900
June	36	23	..	13	1,650
July	11	8	..	3	659
August	32	21	..	11	1,875
Sept.	40	28	1	11	1,235
October	20	15	..	5	1,285
Nov.	17	12	..	5	965
Dec.	18	15	...	3	2,115
Totals 1922.	256	179	1	76	13,739
Totals 1921 ..	112	75	3	34	4,750

LYON COUNTY

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	2	..	..	2	...
February	1	..	..	1	...
March	..	..	..	..	...
April	1	..	..	1	...
May	..	..	..	..	...
June	4	1	..	3	15
July	..	..	..	..	...
August	2	1	..	1	50
Sept.	2	1	..	1	100
October	2	..	..	2	...
Nov.	1	..	..	1	...
Dec.	1	...	...	1	....
Totals 1922.	16	3	...	13	165
Totals 1921 ..	11	3	..	8	90

MARION COUNTY

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	4	2	..	2	300
February	7	6	..	1	820
March	3	3	..	..	445
April	10	7	..	3	1,510
May	11	7	..	4	1,425
June	11	8	..	3	970
July	10	5	..	5	285
August	4	3	..	1	500
September	4	3	..	1	230
October	4	1	..	3	100
Nov.	3	..	..	3	...
Dec.	3	1	...	2	85
Totals 1922.	74	46	...	28	6,670
Totals 1921 ..	214	158	14	42	62,525

WOODSON COUNTY

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	6	5	..	1	160
February	3	3	..	..	50
March	2	2	..	..	80
April	4	2	..	2	35
May	1	..	..	1	...
June	1	1	..	..	30
July	10	5	..	5	285
August	..	..	..	..	...
Sept.	6	5	..	1	235
October	1	1	..	..	50
Nov.	..	..	..	..	..
Dec.	..	...	...	...	....
Totals 1922.	34	24	...	10	925
Totals 1921 ..	42	37	4	1	1,345

MISCELLANEOUS COUNTIES

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	75	50	..	25	1,200
February	38	35	..	3	875
March	31	20	5	6	900
April	45	23	6	16	800
May	40	24	6	10	1,000
June	28	15	4	9	850
July	33	15	5	13	1,000
August	1	..	..	1	...
Sept.	8	1	..	7	15
October	3	..	1	2	...
Nov.	3	..	1	2	...
Dec.	5	1	...	4	50
Totals 1922.	310	184	28	98	6,690
Totals 1921 ..	276	166	23	87	2,736

ARKANSAS BY FIELDS

	Completions	Producers	Gas wells	Failures	Initial Prod.
Stephens Dist.	6	6	...	...	510
El Dorado	533	480	4	49	104,660
Smackover	153	129	16	8	319,760
Wildcats	14	...	...	14	....
Totals 1922.	706	615	20	71	424,930
Totals 1921 .	659	620	...	39	568,885

MARCH

	Completions	Producers	Gas wells	Failures	Initial Prod.
El Dorado	70	66	..	4	14,305
Wildcats	3	..	..	3	.....
Totals 1922.	73	66	..	7	14,305
Totals 1921 ..	19	19	..	..	48,875

APRIL

	Completions	Producers	Gas wells	Failures	Initial Prod.
El Dorado	81	74	..	7	10,535
Wildcats	1	..	..	1	.....
Totals 1922.	82	74	..	8	10,535
Totals 1921 ..	16	15	..	1	34,125

MAY

	Completions	Producers	Gas wells	Failures	Initial Prod.
El Dorado	51	49	..	2	8,945
Wildcats	1	..	..	1	.....
Totals 1922.	52	49	..	3	8,945
Totals 1921 ..	36	35	..	1	38,435

JUNE

	Completions	Producers	Gas wells	Failures	Initial Prod.
El Dorado	41	33	..	8	8,250
Wildcats	5	..	..	5	.....
Totals 1922.	46	33	..	13	8,250
Totals 1921 ..	70	68	..	2	68,850

JULY

	Completions	Producers	Gas wells	Failures	Initial Prod.
El Dorado	46	39	..	7	4,385
Wildcats	11	..	..	11	.....
Totals 1922.	57	39	..	18	4,385
Totals 1921 ..	89	87	..	2	80,075

AUGUST

	Completions	Producers	Gas wells	Failures	Initial Prod.
Stephens Dist.	1	1	..	..	240
El Dorado	21	13	1	7	1,475
Smackover	2	2	..	..	225
Wildcats	11	..	..	11	...
Totals 1922.	35	16	1	18	1,940
Totals 1921 ..	87	85	..	2	95,125

SEPTEMBER

	Completions	Producers	Gas wells	Failures	Initial Prod.
Stephens Dist.	..	..	..	..	.....
El Dorado	33	30	..	3	5,450
Smackover	9	5	1	3	5,730
Wildcats	9	..	..	9	.....
Totals 1922.	51	35	1	15	11,180
Totals 1921 ..	63	63	..	..	50,655

OCTOBER

	Completions	Producers	Gas wells	Failures	Initial Prod.
Stephens Dist.	4	4	..	..	145
El Dorado	15	14	1	..	2,440
Smackover	9	5	3	1	15,200
Wildcats	5	..	..	5	.....
Totals 1922.	33	23	4	6	17,785
Totals 1921 ..	101	91	..	10	74,475

NOVEMBER

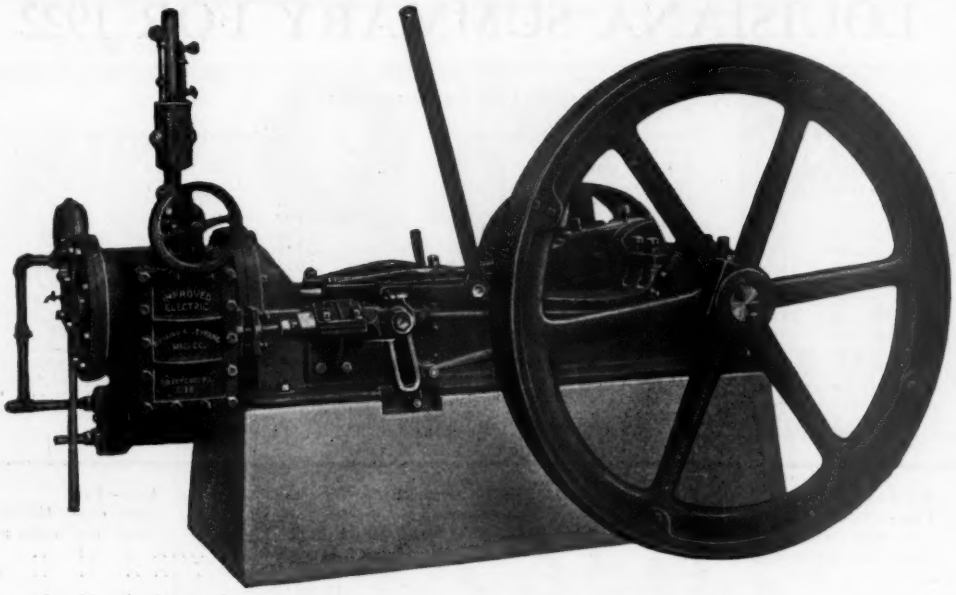
	Completions	Producers	Gas wells	Failures	Initial Prod.
Stephens Dist.	..	..	..	..	.....
El Dorado	16	13	2	1	2,080
Smackover	45	45	..	..	105,570
Wildcats	8	..	..	8	....
Totals 1922.	69	58	2	9	107,650
Totals 1921 ..	70	68	..	2	29,655

DECEMBER

	Completions	Producers	Gas wells	Failures	Initial Prod.
Stephens Dist.	1	1	..	..	125
El Dorado	14	11	..	3	1,575
Smackover	88	72	12	4	193,035
Wildcats	2	..	..	2	.....
Totals 1922.	105	84	12	9	194,735
*Totals 1921 .	100	81	..	19	36,865

*Includes 14 wildcats for year, all dry.

(Continued on page 50.)



BOVAIRD AND SEYFANG

Improved "Electric" Drilling Engine

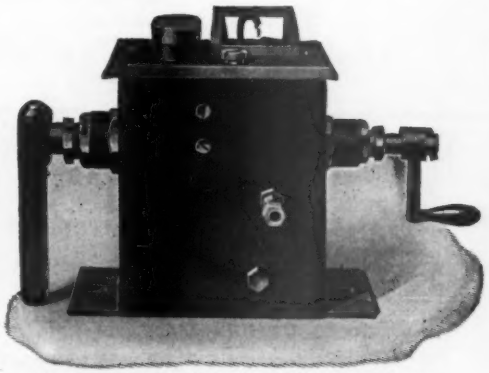
The B. & S. Improved Electric Drilling Engine was designed to meet the increasing demand for a heavy drilling engine to withstand the severe strain to which this class of machinery is often subjected. Realizing that inexperienced men are frequently called upon to operate them, the keynote of the engine has been simplicity, using the least number of parts possible, with a consequent reduction of repair bills.

The Improved Engine, in most cases, will develop over 50 per cent more horsepower than actually rated. Back of the engine is the experience of over half a century of building with the knowledge of what is required for oil field work.

Madison-Kipp Lubricators

are particularly well adapted for the oil fields. The dependability of the Kipp Valveless principle and the sturdy design and construction combine to add years of satisfactory service to engines and machines.

A single feed lubricator on your drilling engine will eliminate many shut downs and save oil. It saves packings, rings and valves, and easily pays its cost in a short time. After you install a Madison-Kipp Lubricator on your drilling engine, lubrication is entirely automatic. The oiler starts and stops with the engine and needs no further adjustments after the setting at time of installation. We can furnish complete fittings for each installation. Lubricators with any number of feeds in stock for stationary oil and gas engines.



Single Sight Feed Madison-Kipp Lubricator

ATLAS SUPPLY COMPANY

General Offices: MUSKOGEE, OKLAHOMA

Phones: 3432, 3433, 3434, 34 35. L. D. Phones 26 and 28.

OKLAHOMA BRANCHES

Tulsa, Bartlesville, Pawhuska, Oilton, Okmulgee, Slick, Bristow, Henryetta Shidler, Duncan, El Dorado, Arkansas

KANSAS BRANCHES

Augusta, El Dorado

TEXAS BRANCHES

Fort Worth, Eastland, Ranger, Breckenridge, Rising Star, Mexia.

Shreveport and Haynesville, Louisiana

LOUISIANA SUMMARY FOR 1922

LOUISIANA PRODUCTION

	Elm Grove	Bellevue	Homer	Haynesville	Bull Bayou	Caddo	Anse La Butte	Edgerly	Evangeline	Vinton	Total Prod. for state
January	.....	.....	646,465	1,545,010	257,650	257,650	3,525	11,005	15,770	105,400	2,946,675
February	.....	.....	563,185	1,605,975	207,305	311,360	3,255	7,280	14,770	103,530	2,816,660
March	.....	211,000	609,885	2,618,025	226,175	341,890	4,495	12,050	15,655	119,225	4,158,400
April	.....	69,690	537,210	1,967,280	216,180	335,340	3,060	9,450	14,450	106,470	3,259,200
May	.....	71,840	539,710	1,495,720	229,710	544,255	2,790	7,905	14,765	104,935	2,811,240
June	10,000	81,650	491,950	1,615,835	213,525	360,785	2,700	8,625	14,065	105,900	2,895,035
July	15,500	110,610	480,995	1,685,690	214,085	365,895	2,545	7,380	14,850	108,035	3,005,585
August	31,000	150,470	472,595	1,701,045	198,090	354,270	2,015	11,005	15,345	116,250	3,052,085
September	32,190	208,710	434,430	1,702,290	182,130	330,630	2,640	11,220	15,120	130,710	3,049,890
October	29,265	159,215	437,805	1,715,260	192,695	352,345	2,975	11,035	16,505	136,430	3,053,530
November	37,500	151,620	399,075	1,554,810	183,525	348,630	2,850	9,420	15,540	138,210	2,841,180
December	41,105	161,415	392,990	1,395,775	186,680	356,345	2,885	9,485	14,975	161,605	2,923,260
Totals 1922	196,560	1,376,220	6,006,295	20,602,715	2,507,750	4,059,395	35,735	115,860	181,810	1,436,700	33,889,480
Totals 1921	.....	.....	13,337,360	3,021,155	3,744,440	5,762,030	53,435	265,720	240,915	1,361,575	*27,814,380
Totals 1920	.....	.....	24,288,200	.....	6,393,050	6,354,100	.....	480,220	244,330	1,312,090	**38,690,040

*Includes 27,750 miscellaneous. **Includes 50,050 miscellaneous.

ELM GROVE

	Completions	Producers	Gas wells	Failures	Initial Prod.
May	3	3	..	..	145
June	1	1	..	..	75
July	2	2	..	..	60
August	3	2	1	..	105
Sept.	3	1	1	1	25
Oct.	...	...	...	...	.....
Nov.	4	2	2	..	350
December	3	3	..	..	45
Totals 1922	19	14	4	1	805

BELLEVUE

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	2	2	..	..	150
February	10	8	1	1	4,830
March	13	9	1	3	6,300
April	24	21	..	3	4,460
May	13	11	..	2	1,770
June	15	12	2	1	1,415
July	16	16	..	..	1,045
August	9	7	..	2	660
September	9	5	3	1	2,360
October	5	1	1	3	125
November	3	3	..	..	80
December	4	3	..	1	10
Totals 1922	123	98	8	17	23,205

1922 BY FIELDS

	Completions	Producers	Gas wells	Failures	Initial Prod.
Elm Grove	3	3	..	..	45
Bellevue	123	98	8	17	23,205
Homer	3	1	..	2	55
Haynesville	683	637	..	46	328,185
Bull Bayou	15	10	..	5	950
Caddo	83	57	..	26	12,610
Anse La Butte	3	..	..	3	...
Edgerly	2	2	..	..	450
Evangeline	5	3	..	2	155
Vinton	30	26	..	4	3,095
Wildcats	137	10	43	84	795
Totals '22	1087	847	51	189	369,545
Totals 1921	590	407	..	183	249,245

HOMER

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	1	..	..	1	...
February	..	..	..	..	...
March	..	..	..	..	...
April	..	..	..	..	...
May	..	..	..	..	...
June	..	..	..	..	...
July	2	1	..	1	55
August	..	..	..	..	...
Sept.	..	..	..	..	...
Oct.	..	..	..	..	...
Nov.	..	..	..	..	...
Dec.	..	..	..	..	...
Totals 1922.	3	1	..	2	55
Totals 1921	120	78	..	42	87,535

HAYNESVILLE

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	42	38	..	4	32,380
February	41	39	..	2	73,450
March	59	55	..	4	70,420
April	73	66	..	7	51,830
May	112	107	..	5	44,040
June	93	90	..	3	25,040
July	108	103	..	5	14,975
August	60	56	..	4	6,480
September	61	53	..	8	6,120
October	14	11	..	3	1,380
November	12	11	..	1	1,165
December	8	8	..	..	905
Totals 1922.	683	637	..	46	328,185
Totals 1921	97	86	..	11	130,265

BULL BAYOU

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	1	1	..	..	20
February	..	..	..	..	...
March	1	1	..	..	75
April	4	1	..	3	50
May	..	..	..	..	...
June	3	3	..	..	30
July	..	..	..	..	...
August	2	2	..	..	165
September	1	1	..	..	10
October	3	1	..	2	600
November	..	..	..	..	...
December	..	..	..	..	...
Total 1922.	15	10	..	5	950
Totals 1921	99	74	..	25	11,250

CADDO

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	3	..	..	3	...
February	5	3	..	2	1,075
March	6	6	..	..	765
April	15	15	..	..	2,025
May	8	6	..	2	730
June	6	6	..	..	2,565
July	6	2	..	4	45
August	5	2	..	3	25
September	8	6	..	2	170
October	6	2	..	4	20
November	7	5	..	2	1,175
December	8	4	..	4	4,015
Totals 1922	83	57	..	26	12,610
Totals 1921	116	95	..	21	11,815

(Continued on page 52)

ARKANSAS SUMMARY

(Continued from page 48)

STEPHENS DISTRICT

	Completions	Producers	Gas wells	Failures	Initial Prod.
August	1	1	...	...	240
Sept.	..	...	...	...	....
October	4	4	...	...	145
November	..	...	...	...	....
Dec	1	1	...	...	125
Totals 1922.	6	6	...	...	510

EL DORADO

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	67	62	...	5	24,085
February	78	76	...	2	21,135
March	70	66	...	4	14,305
April	81	74	...	7	10,535
May	51	49	...	2	8,945
June	41	33	...	8	8,250
July	46	39	...	7	4,385
August	21	13	1	7	1,475
Sept.	33	30	...	3	5,450
October	15	14	1	...	2,440
Nov.	16	13	2	1	2,080
Dec.	14	11	...	3	1,575
Totals 1922.	533	480	4	49	104,660
Totals 1921	645	620	...	25	568,885

SMACKOVER

	Completions	Producers	Gas wells	Failures	Initial Prod.
August	2	2	...	...	225
Sept.	9	5	1	3	5,730
October	9	5	3	1	15,200
Nov.	45	45	...	...	105,570
Dec.	88	72	12	4	193,035
Totals 1922.	153	129	16	8	319,760

WILDCATS

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	3	...	...	3	....
February	2	...	...	2	....
March	3	...	...	3	....
April	1	...	...	1	....
May	1	...	...	1	....
June	5	...	...	5	....
July	11	...	...	11	....
August	11	...	...	11	....
Sept.	9	...	...	9	....
October	5	...	...	5	....
Nov.	8	...	...	8	....
Dec.	2	...	...	2	....
Totals 1922	61	...	...	61	....
Totals 1921	14	...	...	14	....

Branches Located at Following Places:

New York City
Pittsburgh, Pa.
Charleston, W. Va.
Clarksburg, W. Va.
Bowling Green, Ky.
Louisa, Ky.
El Dorado, Ark.
Smackover, Ark.
Bridgeport, Illinois
Shreveport, Louisiana
Haynesville, Louisiana
Harmon, Louisiana
Monroe, Louisiana
Oil City, Louisiana
Basin, Wyoming
Casper, Wyoming
Lander, Wyoming
Rawlins, Wyoming
Denver, Colorado
Winnett, Montana
Shelby, Montana
Great Falls, Mont.

OHIO

Columbus
Logan
Marietta
Newark
West Park

KANSAS

Augusta
Chanute
Coffeyville
El Dorado
Elgin
Eureka
Ottawa
Peabody
Virgil
Winfield

OKLAHOMA

Apperson
Ardmore
Barnsdall
Bartlesville
Blackwell
Bristow
Cushing
Drumright
Duncan
Healdton
Garber
Henryetta
Morris
Morrison
Okemah
Okmulgee
Oklahoma City
Tonkawa
Walters
Wynona
Wilson
Tulsa

TEXAS

Amarillo
Breckenridge
Burkburnett
Fort Worth
Dallas
Eastland
Electra
Graham
Houston
Wichita Falls
Mexia
Orange
Laredo
Humble
Ranger

QUALITY SERVICE PRICE

Q.S.P.

The Three Elements of Our Business Policy

QUALITY

Of Material and Workmanship

SERVICE

In Executing Orders with Promptness and Care

PRICE

Our Prices Are Right, Quality and Service Considered

Continental Quality Products

Can Be Had at All Prominent Oil Country Points. Wire, write or telephone your requirements to any of our branches.

Everything for the Contractor, Producer and Refiner

The Continental Supply Co.

Oil and Gas Well Supplies

General Office - - - - - - St. Louis, Mo.

LOUISIANA SUMMARY

(Continued from page 50.)

LOUISIANA BY FIELDS

ANSE LA BUTTE

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	1	..	..	1	...
February	..	..	..	..	...
March	1	..	..	1	...
April	..	..	..	..	...
May	1	..	..	1	...
June	..	..	..	..	...
July	..	..	..	..	...
August	..	..	..	..	...
September	..	..	..	..	...
October	..	..	..	..	...
November	..	..	..	..	...
December	..	..	..	..	...
Totals 1922	3	..	..	3	...
Totals 1921	6	1	..	5	500

EDGERLY

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	..	..	..	..	...
February	..	..	..	..	...
March	1	1	..	..	100
April	..	..	..	..	...
May	..	..	..	..	...
June	..	..	..	..	...
July	..	..	..	..	...
August	..	..	..	..	...
Sept.	..	..	..	..	...
October	..	..	..	..	...
Nov.	..	..	..	..	...
December	1	1	..	..	350
Totals 1922	2	2	..	..	450
Totals 1921	3	2	..	1	140

EVANGELINE

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	..	..	..	..	...
February	..	..	..	..	...
March	..	..	..	..	...
April	..	..	..	..	...
May	1	..	..	1	...
June	..	..	..	..	...
July	2	1	..	1	70
August	..	..	..	..	...
Sept.	1	1	..	..	25
Oct.	1	1	..	..	60
Nov.	..	..	..	..	...
December	..	..	..	..	...
Totals 1922.	5	3	..	2	155
Totals 1921	10	8	..	2	3,155

VINTON

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	1	1	..	..	15
February	2	2	..	..	160
March	2	2	..	..	150
April	1	1	..	..	5
May	1	1	..	..	10
June	..	..	..	..	...
July	6	4	..	2	255
August	1	1	..	..	250
Sept.	4	4	..	..	140
Oct.	3	2	..	1	130
Nov.	3	2	..	1	210
December	6	6	..	..	1,770
Totals 1922	30	26	..	4	3,095
Totals 1921	20	19	..	1	2,635

WILDCATS

	Completions	Producers	Gas wells	Failures	Initial Prod.
January	7	4	..	3	20
February	2	..	..	2	...
March	2	..	1	1	¶22
April	9	3	1	5	...
May	14	..	4	10	...
June	24	1	7	16	110
July	8	..	1	7	...
August	13	..	5	8	¶93
Sept.	10	1	3	6	665
Oct.	18	1	9	8	¶114
Nov.	13	..	3	10	...
Dec.	17	..	9	8	¶158
Totals 1922	137	10	43	84	795
Totals 1921	119	*44	..	75	1,950

*Largely gassers.

LOUISIANA BY MONTHS

JANUARY

	Completions	Producers	Gas wells	Failures	Initial Prod.
Elm Grove	..	..	..	..	...
Bellevue	2	2	..	..	150
Homer	1	..	..	1	...
Haynesville	42	38	..	4	32,380
Bull Bayou	1	1	..	..	20
Caddo	3	..	..	3	...
Anse La Butte	1	..	..	1	...
Edgerly	..	..	..	..	...
Evangeline	..	..	..	..	...
Vinton	1	1	..	..	15
Wildcats	7	4	..	3	20
Totals 1922.	58	46	..	12	32,585
Totals 1921	112	82	..	30	41,945

FEBRUARY

	Completions	Producers	Gas wells	Failures	Initial Prod.
Elm Grove	..	..	..	..	...
Bellevue	10	8	1	1	4,830
Homer	..	..	..	..	...
Haynesville	41	39	..	2	73,450
Bull Bayou	..	..	..	..	...
Caddo	5	3	..	2	1,075
Anse La Butte	..	..	..	..	...
Edgerly	..	..	..	..	...
Evangeline	..	..	..	..	...
Vinton	2	2	..	..	160
Wildcats	2	..	..	2	...
Totals 1922.	60	52	1	7	79,515
Totals 1921	78	62	..	16	22,805

MARCH

	Completions	Producers	Gas wells	Failures	Initial Prod.
Elm Grove	..	..	..	..	...
Bellevue	13	9	1	3	6,300
Homer	..	..	..	..	...
Haynesville	59	55	..	4	70,420
Bull Bayou	1	1	..	..	75
Caddo	6	6	..	..	765
Anse La Butte	1	..	..	1	...
Edgerly	1	1	..	..	100
Evangeline	..	..	..	..	...
Vinton	2	2	..	..	150
Wildcats	2	..	1	1	¶22
Totals 1922.	85	74	2	9	77,810
Totals 1921	66	41	..	25	33,750

APRIL

	Completions	Producers	Gas wells	Failures	Initial Prod.
Elm Grove	..	..	..	..	...
Bellevue	24	21	..	3	4,460
Homer	..	..	..	..	...
Haynesville	73	66	..	7	51,830
Bull Bayou	4	1	..	3	50
Caddo	15	15	..	..	2,025
Anse La Butte	..	..	..	..	...
Edgerly	..	..	..	..	...
Evangeline	..	..	..	..	...
Vinton	1	1	..	..	5
Wildcats	9	3	1	5	...
Totals 1922.	126	107	1	18	58,370
Totals 1921	60	45	..	15	9,025

MAY

	Completions	Producers	Gas wells	Failures	Initial Prod.
Elm Grove	3	3	..	..	145
Bellevue	13	11	..	2	1,770
Homer	..	..	..	..	...
Haynesville	112	107	..	5	44,040
Bull Bayou	..	..	..	..	...
Caddo	8	6	..	2	730
Anse La Butte	1	..	..	1	...
Edgerly	..	..	..	..	...
Evangeline	1	..	..	1	...
Vinton	1	1	..	..	10
Wildcats	14	..	4	10	...
Totals 1922.	153	128	4	21	46,695
Totals 1921	32	18	..	14	10,395

JUNE

	Completions	Producers	Gas wells	Failures	Initial Prod.
Elm Grove	1	1	..	..	75
Bellevue	15	12	2	1	1,415
Homer	..	..	..	..	...
Haynesville	93	90	..	3	25,040
Bull Bayou	3	3	..	..	30
Caddo	6	6	..	..	2,565
Anse La Butte	..	..	..	..	...
Edgerly	..	..	..	..	...
Evangeline	..	..	..	..	...
Vinton	..	..	..	..	...
Wildcats	24	1	7	16	110
Totals 1922.	142	113	9	20	29,235
Totals 1921	17	10	..	7	11,380

JULY

	Completions	Producers	Gas wells	Failures	Initial Prod.
Elm Grove	2	2	..	..	60
Bellevue	16	16	..	..	1,045
Homer	2	1	..	1	55
Haynesville	108	103	..	5	14,975
Bull Bayou	..	..	..	..	...
Caddo	6	2	..	4	45
Anse La Butte	..	..	..	..	...
Edgerly	..	..	..	..	...
Evangeline	2	1	..	1	70
Vinton	6	4	..	2	255
Wildcats	8	..	1	7	...
Totals 1922.	150	129	1	20	16,505
Totals 1921	31	20	..	11	8,040

AUGUST

	Completions	Producers	Gas wells	Failures	Initial Prod.
Elm Grove	3	2	1	..	105
Bellevue	9	7	..	2	660
Homer	..	..	..	..	...
Haynesville	60	56	..	4	6,480
Bull Bayou	2	2	..	..	165
Caddo	5	2	..	3	25
Anse La Butte	..	..	..	..	...
Edgerly	..	..	..	..	...
Evangeline	..	..	..	..	...
Vinton	1	1	..	..	250
Wildcats	13	..	5	8	¶93
Totals 1922.	93	70	6	17	7,850
Totals 1921	21	12	..	9	1,390

SEPTEMBER

	Completions	Producers	Gas wells	Failures	Initial Prod.
Elm Grove	3	1	1	1	25
Bellevue	9	5	3	1	2,360
Homer	..	..	..	..	...
Haynesville	61	53	..	8	6,120
Bull Bayou	1	1	..	..	10
Caddo	8	6	..	2	175
Anse La Butte	..	..	..	..	...
Edgerly	..	..	..	..	...

	Completions	Producers	Gas wells	Failures	Initial Prod.
Evangeline ..	1	1	..	..	25
Vinton	4	4	..	..	140
Wildcats . ..	10	1	3	6	65
Totals 1922.	97	72	7	18	9,515
Totals 1921 ..	28	20	..	8	7,770

OCTOBER

Elm Grove ...	..	..	..	..	...
Bellevue . ..	5	1	1	3	125
Homer	..	..	..	..	...
Haynesville ..	14	11	..	3	1,380
Bull Bayou ..	3	1	..	2	600
Caddo	6	2	..	4	20
Anse La Butte ..	..	..	..	..	...
Edgerly	..	..	..	..	...
Evangeline ..	1	1	..	..	60
Vinton	3	2	..	1	130
Wildcats . ..	18	1	9	8	¶114
Totals 1922.	50	19	10	21	2,315
Totals 1921 ..	32	17	..	15	16,545

NOVEMBER

Elm Grove ..	4	2	2	..	350
Bellevue . ..	3	3	..	..	80
Homer	..	..	..	..	...
Haynesville ..	12	11	..	1	1,165
Bull Bayou ..	..	..	..	..	...
Caddo	7	5	..	2	1,175
Anse La Butte ..	..	..	..	..	...
Edgerly	..	..	..	..	...
Evangeline ..	..	..	..	..	...
Vinton	3	2	..	1	210
Wildcats . ..	13	..	3	10	...
Totals 1922.	42	23	5	14	2,980
Totals 1921 ..	43	31	..	12	15,625

DECEMBER

Elm Grove ...	3	3	..	..	45
Bellevue	4	3	..	1	10
Homer	..	..	..	..	...
Haynesville...	8	8	..	..	905
Bull Bayou ..	..	..	..	..	...
Caddo	8	4	..	4	4,015
Anse La Butte ..	..	..	..	..	...
Edgerly	1	1	..	..	350
Evangeline ..	..	..	..	..	...
Vinton	6	6	..	..	1,770
Wildcats . ..	17	..	9	8	¶158
Totals 1922	47	25	9	13	7,095
Total 1921 ...	70	49	..	21	70,575

¶Largely gassers.

SWAN
UNDERREAMERS

AT YOUR
SUPPLY STORE

Made By
BRIDGEPORT
WICHITA

"Pipe Always Follows"

CHAPMAN Valves

Cast Steel Drilling Gates

TESTED TO 2500 POUNDS. Every valve tested to 2500 pounds per square inch (a 24-hour test) before leaving the factory.

MORE THAN DOUBLE THE STRENGTH OF CAST IRON. Chapman cast steel has a tensile strength of 65,000 pounds per square inch (elastic limit not less than half the tensile strength). This permits the use of lighter construction—thus the Chapman steel drilling gate is

LESS THAN HALF THE WEIGHT OF CAST IRON VALVES. Easy to handle in the field, lower transportation charges, etc.

Large stocks of these valves in Beaumont

Write for full information on the last word in drilling valves. Also Catalog No. 40, describing our complete line of valves for all phases of the oil industry.

The Chapman Valve Manufacturing Co.

INDIAN ORCHARD, MASS.

Houston Office: Beatty Building. Phone: Preston 6939

LONE STAR

RIG IRONS

Both Common and Ideal Pattern
In All Standard Sizes, In Stock And Ready For Immediate Shipment

MASHER

STEEL AND MACHINERY COMPANY
DALLAS, TEXAS

Production of Texas by Fields

From 1895 to January 1, 1923

Year	Corsicana	Powell	Petrolia	Marion County	Wichita and Wilbarger Counties	Moran	Strawn	Coleman County	Eastland County	Stephens County	Desdemona	Brown County	Thrall	Miscellaneous
1895	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1896	1,450	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1897	65,975	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1898	544,620	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1899	668,483	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1900	829,560	5,479	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1901	763,424	37,121	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1902	571,079	46,812	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1903	401,817	100,143	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1904	374,318	129,329	65,455	.....										
1905	312,595	131,051	101,651	.....										
1906	336,387	675,842	111,072	.....										
1907	276,311	596,897	83,260	.....										
1908	211,117	398,649	82,639	.....										4,525
1909	180,764	383,137	113,485	.....										4,554
1910	137,331	450,188	126,531	251,717	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,656
1911	128,526	373,055	168,965	677,689	899,579	.....	.....	.....	.....	.....	.....	.....	.....	3,379
1912	233,282	251,240	197,421	362,870	4,227,104	.....	.....	.....	.....	.....	.....	.....	.....	4,062
1913	158,830	283,476	344,868	262,392	8,131,624	.....	.....	.....	.....	.....	.....	.....	.....	7,074
1914	133,811	282,279	550,585	180,584	8,227,951	68,191	.....	.....	.....	.....	.....	.....	.....	12,900
1915	143,275	237,410	349,857	123,464	5,833,386	109,116	50,498	.....	.....	.....	.....	.....	613,182	4,061
1916	135,263	215,729	302,145	64,971	7,837,386	135,608	175,147	.....	.....	.....	.....	.....	432,695	32,140
1917	131,828	196,855	282,420	57,952	9,541,636	68,118	340,950	.....	93,053	36,219	.....	6,040	176,887	111,220
1918	*361,980	.....	297,320	.....	12,159,032	54,900	185,520	31,253	3,107,120	790,243	.....	451,002	12,000	e130,000
1919	*150,000	.....	212,624	**	30,279,108	32,500	101,300	46,590	22,379,665	10,514,216	7,375,825	213,256	8,200	235,075
1920	530,000	.....	135,385	.....	32,895,485	48,575	512,260	83,785	10,141,385	23,852,050	5,097,745	114,665	8,000	e25,000
1921	305,335	.....	132,295	.....	24,184,955	50,455	262,055	66,190	5,887,420	31,037,710	2,467,115	122,475	73,280	e24,000
1922	245,705	.....	121,295	.....	19,030,508	308,545	602,180	34,915	4,787,315	14,924,980	3,488,755	224,980	51,100	†34,010
T't'ls	8,333,066	4,794,692	3,779,273	1,981,639	163,247,754	876,008	2,229,910	262,734	46,395,958	81,155,418	18,429,440	1,132,418	375,344	635,656

	1920	1921	1922	Total
Mexia-Currie	.....	4,716,805	35,120,405	39,837,210
Young County	134,895	2,820,080	3,723,305	6,678,280
Archer County	49,850	422,205	849,680	1,321,735
Rockdale	.....	.....	93,600	93,600
Laredo Dist. (Mirando)	.....	.....	765,000	765,000

6—Includes Powell. **Figures not obtainable. e—Estimated. †Mitchell County production.

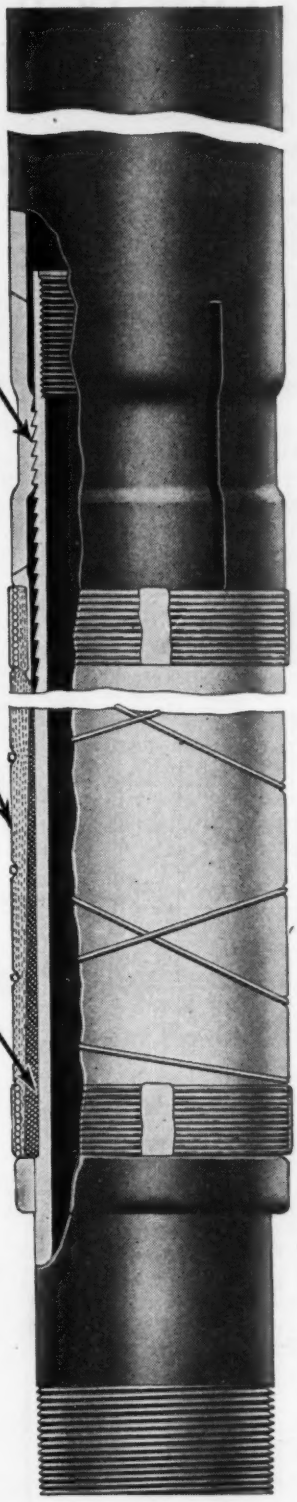
Year	Spindle Top	Sour Lake	Batson	Saratoga	Humble	Goose Creek	Orange County	Matagorda County	Damon Mound	Hull	Barbers Hill	West Columbia	Dayton	Blue Ridge and Other Pools	San Antonio District and Somerset
1901	3,593,113	.....	.....	.....	.....	.....	.....	.....	.....						
1902	17,420,949	44,338	.....	.....	.....	.....	.....	.....	.....						
1903	8,600,905	8,848,159	4,518	.....	.....	.....	.....	.....	.....						
1904	3,433,842	6,442,357	10,904,737	739,239	.....	.....	.....	151,936	.....						
1905	1,600,379	3,369,012	3,790,629	2,922,215	18,066,428	.....	.....	46,470	.....	.....	.....	.....	60,294	.....	.....
1906	1,075,755	2,156,010	2,388,238	2,289,057	3,570,845	.....	.....	8,000	.....	.....	.....	.....	192,460	.....	.....
1907	1,613,513	2,354,997	2,166,554	2,198,585	2,930,842	.....	.....	4,500	.....	.....	.....	.....	120,036	.....	.....
1908	1,747,537	1,595,060	1,593,570	1,634,786	3,778,521	.....	.....	62,640	.....	.....	.....	.....	39,901	31,185	.....
1909	1,388,170	1,703,798	1,206,214	1,183,559	3,237,060	.....	.....	29,103	.....	.....	.....	.....	17,647	87,039	.....
1910	1,182,436	1,518,723	1,113,767	1,024,348	2,495,511	.....	.....	455,999	.....	.....	.....	.....	9,582	129,497	.....
1911	965,939	1,364,880	1,023,493	925,777	2,426,220	.....	.....	561,828	.....	.....	.....	.....	4,344	2,800	.....
1912	822,916	1,175,108	844,563	1,116,655	1,829,923	43,808	.....	300,000e	.....	.....	.....	.....	12,151	1,044	.....
1913	716,374	1,348,053	741,350	937,720	1,504,880	249,641	17,706	294,553	.....	.....	.....	.....	13,329	1,620	.....
1914	580,130	5,209,208	775,804	889,743	2,799,458	134,748	43,208	164,192	.....	.....	.....	.....	18,791	1,780	.....
1915	388,266	4,114,622	703,686	864,266	11,061,802	119,336	21,697	137,481	.....	.....	.....	.....	10,378	47,254	.....
1916	340,441	4,923,332	744,915	781,128	10,925,805	397,291	17,758	158,336	.....	.....	.....	.....	8,571	43,921	.....
1917	308,039	4,763,004	692,417	682,797	7,389,831	7,300,279	7,023	128,011	.....	.....	.....	.....	9,995	159,245	.....
1918	502,265	3,115,033	654,950	790,740	5,645,104	9,419,132	3,425	99,540	486,640	330,300	20,000	136,350	7,442	40,000	58,400
1919	458,680	2,740,142	502,200	616,110	3,270,617	7,288,716	4,400e	53,260	434,700	1,476,405	169,415	8,128,809	1,000	24,910	94,100
1920	323,995	2,073,485	484,035	913,735	3,692,115	5,666,390	4,000	75,775	1,259,375	4,468,615	136,375	10,563,150	1,000	*173,085	245,135
1921	321,080	1,749,625	516,225	936,695	3,098,500	5,647,020	704,870	89,405	1,353,960	8,717,970	49,885	12,573,450	30,410	*461,035	482,340
1922	295,015	1,737,685	430,265	661,870	2,552,940	5,248,065	**	34,730	945,410	6,819,135	236,185	11,631,750	38,925	*415,560	955,510
Total	47,679,659	62,346,631	31,282,130	23,108,025	90,278,402	41,514,326	***	2,855,759	4,480,085	21,812,425	611,860	43,033,509	596,256	1,619,975	****

	1920	1921	1922	Total
Pierce Junction	.....	1,403,940	1,145,225	2,549,165
Nacogdoches	75,000	103,035	58,875	236,910

*Blue Ridge only. **5,492,345. ***6,316,432. ****1,835,485. e—Estimated.

The above table was compiled from the files of various oil companies, from the files of The OIL WEEKLY, the Oil Investors Journal, and from a year book issued by the Bureau of Mines, U. S. G. S.

Packer Perfection



Point 1—
Ratchet Threads
These are left hand buttress threads and being shallow cut, do not weaken the pipe to any extent, preventing the packer from uncollapsing when exposed to high gas pressure. They can be unscrewed and thus partially release the packing if it is desired to pull the packer.

Point 2—
Canvas Packing
The canvas consists of eight-ounce duck, strong and durable, yet easily compressed to almost iron hardness, thus insuring a nearly perfect pack the full length of the collapsed section of 12 to 14 inches.

Point 3—
Cone Lead
The lead being more substantial and non-compressing than canvas and soft enough, insures a good joint on the pipe and increases the packing capacity. Being smooth, it allows the packing to slide free, thus making a longer pack which insures more contact on well casing and lessens danger of bursting pipe.

The Layne Patent Lead Cone and Canvas Packer

Has been proven by many years of use in every oil field to be the best means for sealing off in oil wells.

Its patented construction permits a better and longer pack than is obtainable in other packers, and lessens the danger of bursting pipe. Manufactured in all standard sizes this packer is the most reliable on the market.

We also manufacture pins and screw-off packers for open holes, lead seals, wash plugs, wash rings, etc.

Phone Us Your Orders
We Make Your Emergency Our Emergency

We Are Equipped to Handle Export Orders

THE LAYNE & BOWLER COMPANY

Factories:
HOUSTON **MEMPHIS**

TEXAS SUMMARY FOR 1922

TEXAS FIELD STATISTICS FOR 1922

Field—	Completions	Producers	Failures	Initial Production	Monthly Production
Stephens County	374	287	87	74,800	14,924,980
Eastland County	335	267	66	72,890	4,787,315
Desdemona-Pioneer	22	15	7	525	3,488,755
Mexia-Currie	899	561	338	678,070	35,120,405
Corsicana	....	....	....	.....	245,705
Strawn-Palo Pinto	47	29	18	1,576	602,180
Moran	126	69	57	8,195	308,545
Brown County	32	21	11	785	224,980
Thrall	....	....	....	.....	51,100
Mitchell County	9	5	4	700	34,010
Coleman County	4	1	3	25	34,915
Burkburnett	195	134	61	7,240	11,486,740
Electra	560	420	140	54,060	6,606,320
Young County	294	229	65	42,565	3,723,305
K. M. A.	37	29	8	1,290	683,855
Holliday-Archer County	146	110	36	8,485	849,680
Iowa Park	17	11	6	395	253,590
Petrolia	6	3	3	60	121,295
Rockdale	101	92	9	4,000	93,600
Spindle Top	16	12	4	272	295,015
Markham	...	....	....	.....	34,730
Batson	10	10	....	650	430,265
West Columbia	66	49	17	78,030	11,631,750
Humble	33	27	6	3,350	2,552,940
Sour Lake	44	40	4	2,235	1,737,685
Goose Creek	65	54	11	30,990	5,248,065
Saratoga	12	9	3	340	661,870
Somerset	177	177	....	2,130	955,510
Mirando	56	56	....	10,000	765,780
Barbers Hill	11	5	6	3,005	236,185
Hull	105	83	22	113,380	6,819,135
Blue Ridge	20	11	9	13,745	415,560
Damon Mound	33	22	11	4,995	945,410
Dayton	4	....	4	.....	38,925
Orange County	164	146	18	140,630	5,492,345
Pierce Junction	47	22	25	42,990	1,145,225
Nacogdoches	....	....	....	.....	58,875
Wildcats	314	64	250	17,530	.....
Totals 1922	4,381	3,072	1,309	1,419,933	117,106,545
Totals 1921	3,111	2,167	994	1,201,185	103,322,000

TEXAS BY FIELDS

MEXIA-CURRIE

Field—	Completions	Producers	Failures	Init. Prod.	Monthly Prod.
Feb.	96	66	30	131,135	4,202,520
March	113	79	34	108,020	4,869,480
April	160	108	52	88,485	3,551,700
May	88	53	35	53,650	2,848,125
June	92	48	44	35,430	1,705,500
July	93	55	38	36,875	2,214,725
Aug.	52	38	14	19,850	2,514,760
Sept.	35	20	15	6,960	2,072,700
Oct.	30	15	15	4,630	2,289,320
November	24	15	9	5,385	2,166,630
December	26	9	17	655	2,079,235
Totals 1922	899	561	338	678,070	35,120,405
Totals 1921	83	58	25	369,360	4,716,805

STEPHENS COUNTY

Field—	Completions	Producers	Failures	Init. Prod.	Monthly Prod.
Jan.	39	33	6	7,620	1,586,190
Feb.	20	15	5	7,335	1,358,735
March	26	18	8	2,845	1,361,450
April	37	25	12	8,280	1,296,480
May	31	26	5	13,945	1,343,620
June	43	38	5	7,300	1,293,525
July	49	38	11	7,145	1,292,210
Aug.	35	24	11	3,810	1,204,275
Sept.	23	17	6	2,250	1,080,035
Oct.	21	18	3	1,725	1,068,070
Nov.	28	20	8	4,445	1,041,940
Dec.	22	15	7	8,100	998,450
Totals '22	374	287	87	74,800	14,924,980
Totals '21	964	788	176	274,225	31,037,710

EASTLAND COUNTY

Field—	Completions	Producers	Failures	Init. Prod.	Monthly Prod.
Jan.	5	4	1	280	385,905
Feb.	9	7	2	1,305	345,735
March	17	14	3	1,415	383,160
April	15	11	4	4,030	364,110
May	25	19	6	11,100	406,760
June	30	24	6	17,730	410,240
July	53	38	15	17,605	458,900
Aug.	53	44	9	8,665	462,945
Sept.	49	42	7	4,210	424,890
Oct.	22	20	2	1,305	396,610
Nov.	23	19	4	2,260	372,940
Dec.	34	27	7	2,985	373,120
Totals '22	335	269	66	72,890	4,787,315
Totals '21	199	133	66	18,935	5,887,420

DESDEMONA-PIONEER

	Completions	Producers	Failures	Init. Prod.	Monthly Prod.
Jan.	1	1	..	35	163,060
Feb.	2	1	1	10	155,925
March	2	..	2	..	179,370
April	1	..	1	..	183,030
May	2	..	2	..	293,800
June	3	2	1	10	509,290
July	2	2	..	20	431,590
Aug.	..	..	..	..	345,185
Sept.	2	2	..	45	327,750
Oct.	2	2	..	115	315,390
Nov.	..	..	..	...	286,950
Dec.	5	5	..	290	297,415
Totals '22	22	15	7	525	3,488,755
Totals '21	46	26	20	2,150	2,467,115

MORAN

	Completions	Producers	Failures	Init. Prod.	Monthly Prod.
Jan.	..	..	..	...	6,420
Feb.	..	..	..	...	6,755
March	..	..	..	...	4,525
April	..	..	..	...	9,750
May	..	..	..	...	10,485
June	1	1	..	1,500	8,815
July	..	..	..	...	33,700
Aug.	3	3	..	105	27,515
Sept.	7	6	1	340	29,460
Oct.	20	9	11	445	39,565
Nov.	39	17	22	880	45,900
Dec.	56	33	23	4,925	85,655
Totals '22	126	69	57	8,105	308,545
Totals '21	..	..	..	....	50,455

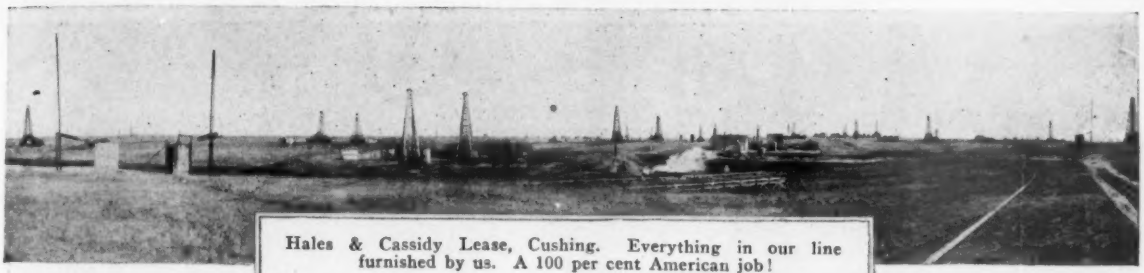
STRAWN-PALO PINTO COUNTY

	Completions	Producers	Failures	Init. Prod.	Monthly Prod.
Jan.	..	..	..	...	30,260
Feb.	..	..	..	...	34,195
March	..	..	..	...	33,855
April	..	..	..	...	46,050
May	..	..	..	...	102,690
June	4	3	1	70	66,415
July	7	4	3	195	56,210
Aug.	8	6	2	690	54,830
Sept.	11	8	3	520	53,400
Oct.	4	2	2	10	44,760
Nov.	5	1	4	35	40,390
Dec.	8	5	3	56	39,125
Totals '22	47	29	18	1,576	602,180
Totals '21	..	..	..	....	262,055

BROWN COUNTY

	Completions	Producers	Failures	Init. Prod.	Monthly Prod.
Jan.	1	1	..	30	15,700
Feb.	..	..	..	...	15,780
March	1	..	1	...	16,675
April	3	2	1	60	19,080
May	2	1	1	5	19,840
June	1	1	..	¶	18,490
July	3	3	..	170	19,625
Aug.	4	2	2	50	20,190
Sept.	3	1	2	10	19,290
Oct.	2	2	..	125	22,515
Nov.	3	2	1	75	19,350
Dec.	9	6	3	260	18,445
Totals '22	32	21	11	785	224,980
Totals '21	7	4	3	225	122,475

¶Gas.



Hales & Cassidy Lease, Cushing. Everything in our line furnished by us. A 100 per cent American job!

A 10 to 1 BET!

Go out into the oil fields. Talk with men who KNOW bolted tanks from EXPERIENCE. Find out from them just how much oil they lose from evaporation.

It's a 10 to 1 bet that you'll find every bolted tank that is really "holding the oil"—with practically no evaporation loss—to be an American Vapor Proof Segment Bolted Tank.

This tank practically eliminates evaporation loss, because of its segment principle, double channel bolted construction, and its new improved anti-vacuum and pressure valve. It is as close to 100 per cent gas tight as a bolted tank can be. And it has many other important features.

The only real competition that this tank has is the American Special Welded Tank, which holds ALL of the oil and its vapor—100 per cent. It will pay you to get full information on these tanks now. Also, let us figure on anything else you need in this line.

Check your requirements on the list of American Quality Products at the left—and mail it to us now.

AMERICAN TANK CO. TRADE Quality MARK WHOLESALE RETAIL

AMERICAN QUALITY PRODUCTS:

- —Oil Refining Equipment
- —Bolted Steel Tanks
- —Welded Steel Tanks
- —Truck Tanks
- —Dump Bodies
- —Wood Hydraulic Hoists
- —Condenser Boxes
- —Absorbers
- —Agitators
- —Pressure Tanks
- —Redwood Tanks
- —Etc., Etc.

(Check your requirements on this list—tear out and mail it to us now.)

AMERICAN TANK COMPANY

Oklahoma City, Okla.

Offices: Tulsa, Tonkawa, Marland and Morrison, Okla.

DISTRIBUTORS:

MAHLANDT TANK CO. Cleveland, Terlton, Hominy and Mannford, Okla.

TEXAS TANK CO. Mexia and Kosse, Texas Independence and Eureka, Kansas

VENNUM TANK CO. Shidler and Pawhuska, Oklahoma

OKLAHOMA TANK CO. Cushing, Ingalls, Yale and Drumwright, Okla.

R. POGUE TANK CO. Slick, Okla.

PRODUCERS TANK CO. Bristow, Okla.

DOWNEY TANK CO. El Dorado and Smackover, Ark.

CARGILE TANK CO. Eastland and Breckenridge, Texas

M—K TANK CO. Duncan, Okla.

View of Mutual Oil Company's J. A. Driver

TEXAS BY FIELDS

CORSICANA

	Completions	Producers	Gas wells	Failures	Initial Prod.
Jan.	..	..	..	...	24,490
Feb.	..	..	..	...	22,260
March	..	..	..	...	25,050
April	..	..	..	...	24,750
May	..	..	..	...	24,140
June	..	..	..	...	19,240
July	..	..	..	...	19,035
Aug.	..	..	..	...	16,975
Sept.	..	..	..	...	16,350
Oct.	..	..	..	...	17,360
Nov.	..	..	..	...	17,515
Dec.	..	..	..	...	18,540
Totals '22	..	..	..	...	245,705
Totals '21	..	..	..	...	305,335

MITCHELL COUNTY

June	2	2	..	600	2,550
July	1	..	1	...	4,650
Aug.	..	..	..	...	4,615
Sept.	1	..	1	...	4,170
Oct.	1	1	..	50	5,760
Nov.	2	2	..	50	5,815
Dec.	2	..	2	...	6,450
Totals '22	9	5	7	700	34,010

THRALL

Jan.	..	..	..	.....	4,340
Feb.	..	..	..	.....	3,990
March	..	..	..	.....	4,525
April	..	..	..	.....	4,800
May	..	..	..	.....	4,225
June	..	..	..	.....	3,865
July	..	..	..	.....	4,185
Aug.	..	..	..	.....	4,265
Sept.	..	..	..	.....	4,050
Oct.	..	..	..	.....	4,300
Nov.	..	..	..	...	4,090
Dec.	..	..	..	...	4,465
Totals '22	..	..	..	...	51,100
Totals '21	..	..	..	...	73,280

COLEMAN COUNTY

Jan.	1	..	1	.....	3,410
Feb.	..	..	..	.....	2,765
March	1	..	1	.....	3,565
April	..	..	..	.....	2,250
May	1	..	1	.....	2,405
June	..	..	..	.....	2,440
July	..	..	..	.....	2,855
Aug.	..	..	..	.....	2,325
Sept.	..	..	..	.....	2,520
Oct.	..	..	..	.....	3,295
Nov.	1	1	..	25	2,775
Dec.	..	..	..	...	4,310
Totals '22	4	1	3	25	34,915
Totals '21	10	4	6	55	66,190

CENTRAL WEST TEXAS WILDCATS

	Completions	Producers	Failures	Init. Prod.	Monthly Prod.
Jan.	10	..	10	...	.....
Feb.	13	4	9	725	.....
March	11	2	9	10	.....
April	17	6	11	2,705	.....
May	13	7	6	1,260	.....
June	9	2	7	¶	.....
July	10	3	7	20	.....
Aug.	15	9	6	10,080	.....
Sept.	28	8	20	50	.....
Oct.	6	2	4	20	.....
Nov.	14	5	9	135	.....
Dec.	14	4	10	115	.....
Totals '22	160	52	108	15,120	.....

¶Gas

BURKBURNETT

Jan.	14	11	3	960	1,165,480
Feb.	8	6	2	305	1,006,460
Mch.	12	7	5	625	1,055,085
April	17	15	2	490	1,017,690
May	16	13	3	615	1,019,095
June	15	14	1	610	959,925
July	18	12	6	465	982,390
Aug.	17	11	6	595	951,000
Sept.	28	16	12	705	876,270
Oct.	13	8	5	260	846,380
Nov.	15	11	4	1,385	806,700
Dec.	22	10	12	225	800,265
Totals '22	195	134	61	7,240	11,486,740
Totals '21	352	218	134	11,035	18,561,730

ELECTRA

Jan.	23	21	2	2,830	359,205
Feb.	17	15	2	1,650	334,355
March	20	19	1	1,025	380,400
April	38	30	8	1,675	377,310
May	42	34	8	7,505	437,255
June	40	33	7	6,935	504,675
July	80	64	16	8,405	601,865
Aug.	75	54	21	8,155	698,045
Sept.	54	27	27	3,260	739,350
Oct.	63	39	24	3,590	711,685
Nov.	43	37	6	4,835	696,750
Dec.	65	47	18	4,195	765,425
Totals '22	560	420	140	54,060	6,606,320
Totals '21	237	159	78	8,375	4,205,510

YOUNG COUNTY

Jan.	22	17	5	3,640	336,540
Feb.	33	26	7	3,850	280.525
March	18	14	4	3,710	292,085
April	29	25	4	3,220	264,750
May	24	19	5	2,235	311,900
June	26	21	5	3,470	314,400
July	24	18	6	5,315	333,035
Aug.	25	17	8	5,570	357,820
Sept.	20	16	4	4,185	314,340
Oct.	28	22	6	3,060	323,600
Nov.	24	16	8	1,625	311,215
Dec.	21	18	3	2,685	283,095
Totals '22	294	229	65	42,565	3,723,305
Totals '21	204	168	36	38,960	2,820,080

HOLLIDAY-ARCHER COUNTY

Jan.	6	2	4	80	55,535
Feb.	2	1	1	75	43,330
March	1	1	..	25	43,865
April	5	3	2	380	42,690
May	8	5	3	365	52,935
June	8	6	2	400	59,065
July	11	9	2	835	74,340
Aug.	12	10	2	1,130	75,640
Sept.	20	15	5	1,030	84,600
Oct.	24	20	4	1,400	103,270
Nov.	18	14	4	750	102,715
Dec.	31	24	7	2,015	111,695
Totals '22	146	110	36	8,485	849,680
Totals '21	73	36	37	7,970	422,205

K-M-A DISTRICT

Jan.	2	2	..	40	69,550
Feb.	3	3	..	65	55,895
March	3	3	..	70	56,360
April	5	5	..	135	56,580
May	2	2	..	45	56,845
June	1	1	..	250	53,815
July	1	1	..	70	54,285
Aug.	3	2	1	260	54,640
Sept.	5	3	2	100	58,530
Oct.	5	4	1	155	57,620
Nov.	3	1	2	25	53,590
Dec.	4	2	2	75	56,145
Totals '22	37	29	8	1,290	683,855
Totals '21	104	57	47	3,550	1,193,695

IOWA PARK

Jan.	..	..	..	.....	20,500
Feb.	..	..	..	.....	18,795
March	..	..	..	.....	21,235
April	..	..	..	.....	20,550
May	..	..	..	.....	21,080
June	..	..	..	.....	20,475
July	..	..	..	.....	21,080
Aug.	..	..	..	.....	21,040
Sept.	3	3	..	195	20,250
Oct.	6	3	3	65	21,935
Nov.	13	2	1	25	22,315
Dec.	5	3	1	110	24,335
Totals '22	17	11	6	395	253,590
Totals '21	60	45	15	585	224,029

PETROLIA

Jan.	1	1	..	¶	10,800
Feb.	..	..	..	...	9,555
March	2	1	1	30	9,765
April	..	..	..	...	9,540
May	..	..	..	...	10,115
June	..	..	..	...	10,240

lease in Bunger Field, Young County, Texas —Photo by Miller, Graham, Texas.

	Com-pletions	Pro-ducers	Fail-ures	Init. Prod.	Monthly Prod.
July	..	..	..	...	10,850
Aug.	..	..	..	...	11,315
Sept.	1	..	1	...	10,590
Oct.	1	1	..	¶	10,425
Nov.	1	..	1	...	9,075
Dec.	..	..	..	...	9,025
Totals '22	6	3	3	60	121,295
Totals '21	1	..	1	...	132,295

¶Gas

NORTH TEXAS WILDCATS

Jan.	1	..	1	...	.....
Feb.	1	..	1	...	.....
March	1	..	1	...	.....
April	5	..	5	...	.....
May	2	..	2	...	.....
June	5	..	5	...	.....
July	4	..	4	...	.....
Aug.	4	1	3	40	.....
Sept.	1	1	..	250	.....
Oct.	10	2	8	100	.....
Nov.	4	1	3	25	.....
Dec.	9	2	7	¶	.....
Totals '22	47	7	40	415	.....

¶Gas.

BARBERS HILL

Jan.	..	..	..	...	15,065
Feb.	..	..	..	...	8,570
March	..	..	..	...	11,935
April	..	..	..	...	10,080
May	..	..	..	...	2,325
June	1	1	..	100	9,750
July	4	1	3	5	10,850
Aug.	1	1	..	200	14,880
Sept.	1	1	..	1,600	23,910
Oct.	1	..	1	...	54,465
Nov.	..	..	..	...	48,750
Dec.	3	1	2	1,100	25,605
Totals '22	11	5	6	3,005	236,185
Totals '21	3	1	2	1,000	49,885

BATSON

Jan.	..	..	..	...	39,910
Feb.	..	..	..	...	32,930
March	..	..	..	...	39,370
April	..	..	..	...	36,960
May	1	1	..	¶	36,765
June	3	3	..	29	35,250
July	2	2	..	30	37,605
Aug.	..	..	..	...	35,525
Sept.	1	1	..	5	34,500
Oct.	2	2	..	85	36,520
Nov.	1	1	..	500	33,000
Dec.	..	..	..	...	31,930
Totals '22	10	10	..	650	430,265
Totals '21	14	12	2	485	516,225

¶Gas.

BLUE RIDGE

	Com-pletions	Pro-ducers	Fail-ures	Init. Prod.	Monthly Prod.
Jan.	1	1	..	6,000	46,625
Feb.	1	..	1	....	34,160
March	..	..	..	....	22,505
April	2	1	1	30	18,000
May	5	2	3	1,300	27,510
June	1	..	1	....	16,575
July	4	2	2	1,615	31,835
Aug.	1	1	..	1,000	54,280
Sept.	..	..	..	....	39,150
Oct.	1	1	..	3,500	36,240
Nov.	3	2	1	150	65,400
Dec.	1	1	..	150	23,280
Totals '22	20	11	9	13,745	415,560
Totals '21	31	17	14	13,430	461,035

DAMON MOUND

Jan.	3	1	2	50	70,915
Feb.	2	2	..	550	63,340
March	1	..	1	....	77,500
April	2	2	..	2,200	73,440
May	1	..	1	....	95,670
June	2	..	2	....	83,700
July	5	3	2	285	93,465
Aug.	5	3	2	875	100,285
Sept.	2	2	..	185	97,200
Oct.	6	5	1	475	101,340
Nov.	1	1	..	10	89,400
Dec.	3	3	..	365	89,155
Totals '22	33	22	11	4,995	945,410
Totals '21	17	9	8	10,820	1,353,960

DAYTON

Jan.	..	..	..	.....	6,200
Feb.	..	..	..	.....	5,600
March	..	..	..	.....	6,200
April	..	..	..	.....	3,900
May	..	..	..	.....	2,325
June	..	..	..	.....	2,250
July	1	..	1	.....	2,325
Aug.	2	..	2	.....	2,075
Sept.	..	..	..	.....	2,070
Oct.	1	..	1	.....	2,015
Nov.	..	..	..	...	1,950
Dec.	..	..	..	...	2,015
Totals '22	4	..	4	...	38,925
Totals '21	..	..	..	...	30,410

GOOSE CREEK

Jan.	3	3	..	700	365,955
Feb.	2	1	1	60	338,380
March	2	2	..	70	367,195
April	5	5	..	4,055	403,290
May	6	4	2	435	465,185
June	6	6	..	4,345	449,550
July	4	3	1	3,240	428,080
Aug.	4	3	1	5,105	433,545
Sept.	9	7	2	4,280	446,820
Oct.	6	6	..	500	488,840
Nov.	5	4	1	3,950	473,250
Dec.	13	10	3	4,250	587,975
Totals '22	65	54	11	30,990	5,248,065
Totals '21	75	63	12	32,765	5,647,020

HULL

	Com-pletions	Pro-ducers	Fail-ures	Init. Prod.	Monthly Prod.
Jan.	1	1	..	1,500	272,205
Feb.	3	2	1	675	429,350
March	4	2	2	700	429,475
April	4	4	..	7,500	419,040
May	7	5	2	10,150	577,220
June	4	3	1	7,950	686,885
July	14	11	3	11,750	594,455
Aug.	9	8	1	9,350	588,660
Sept.	13	11	2	10,300	584,190
Oct.	16	14	2	22,720	721,060
Nov.	15	11	4	18,350	765,560
Dec.	15	11	4	11,435	751,035
Totals '22	105	83	22	113,380	6,819,135
Totals '21	67	55	12	103,310	8,717,970

HUMBLE

Jan.	..	..	..	...	211,855
Feb.	2	2	..	75	198,300
March	2	..	2	...	212,970
April	1	1	..	200	193,290
May	1	1	..	150	210,520
June	4	3	1	485	218,690
July	3	3	..	245	221,960
Aug.	3	2	1	230	204,630
Sept.	7	6	1	770	207,060
Oct.	3	2	1	525	235,880
Nov.	5	5	..	560	223,950
Dec.	2	2	..	110	213,835
Totals '22	33	27	6	3,350	2,552,940
Totals '21	16	12	4	3,330	3,098,500

MARKHAM

Jan.	..	..	..	.....	2,620
Feb.	..	..	..	.....	3,500
March	..	..	..	.....	3,875
April	..	..	..	.....	3,150
May	..	..	..	.....	2,325
June	..	..	..	.....	2,250
July	..	..	..	.....	2,325
Aug.	..	..	..	.....	2,325
Sept.	..	..	..	.....	2,700
Oct.	..	..	..	.....	3,100
Nov.	..	..	..	...	3,150
Dec.	..	..	..	...	3,410
Totals '22	..	..	..	...	34,730
Totals '21	7	..	7	...	89,405

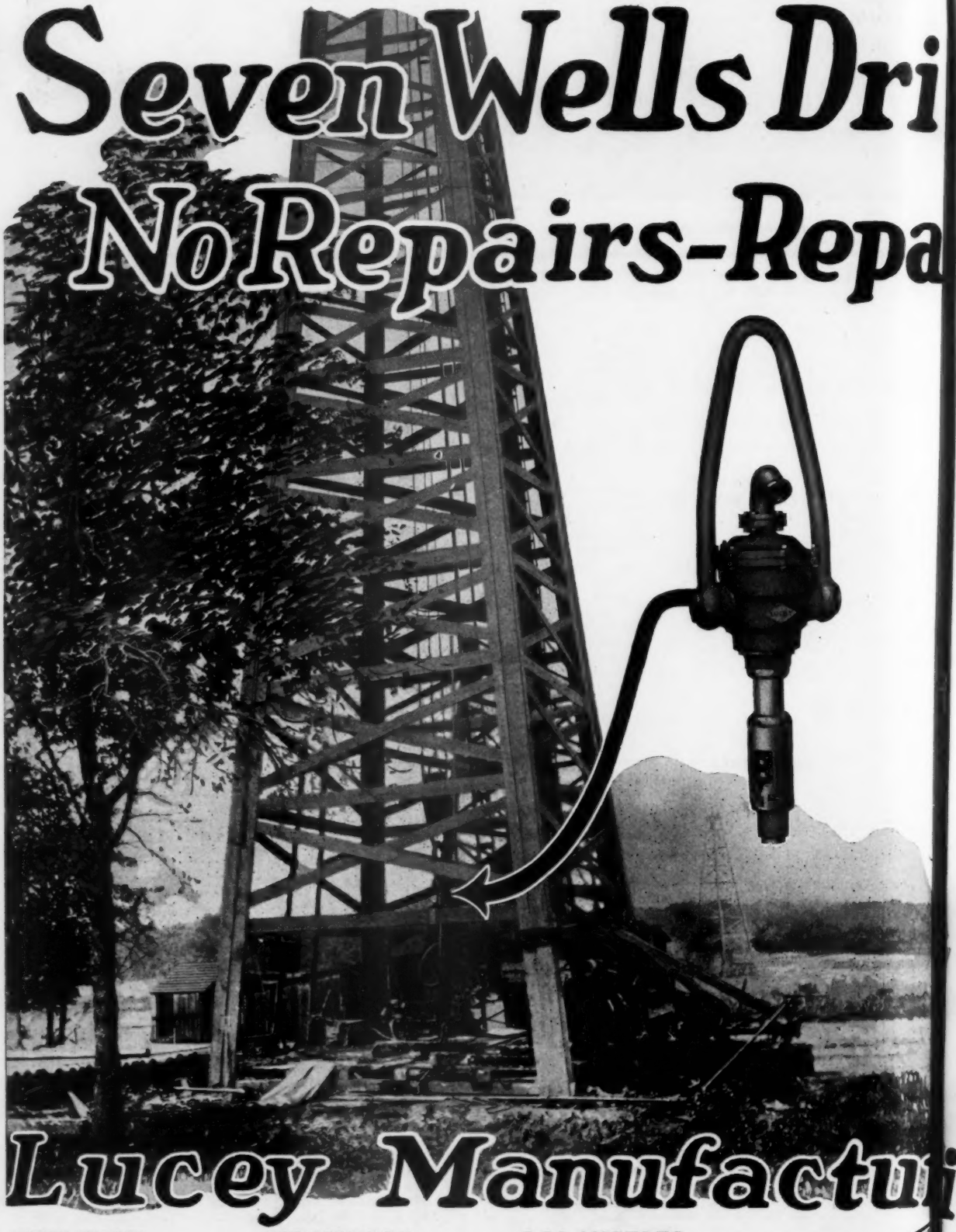
NACOGDOCHES

Jan.	..	..	..	.....	7,750
Feb.	..	..	..	.....	7,000
March	..	..	..	.....	7,950
April	..	..	..	.....	7,050
May	..	..	..	.....	6,200
June	..	..	..	.....	3,750
July	..	..	..	.....	3,875
Aug.	..	..	..	.....	3,100
Sept.	..	..	..	.....	3,000
Oct.	..	..	..	.....	3,100
Nov.	..	..	..	...	3,000
Dec.	..	..	..	...	3,100
Totals '22	..	..	..	...	58,875
Totals '21	..	..	..	...	103,035

(Continued on page 62)

Seven Wells Dri

No Repairs-Repa



Lucey Manufactu

NEW YORK PITTSBURGH LOS ANGELES WHEREVER

BRANCHES IN: Houston, Fort Worth, Casper, Beaumont, Tulsa, San Francisco, Shreveport.

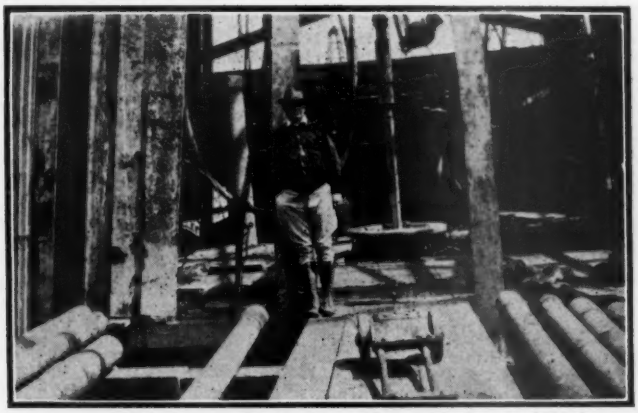
PLANTS: Chattanooga, Tenn.—Houston, Texas.

rilled 12,162 feet—
backed joints only twice

THAT'S the service the LUCEY Improved Swivel gave J. H. Hudson, contractor in the Hewitt field, Oklahoma, who drilled seven wells with this swivel. Mr. Hudson expresses his satisfaction in these words: "It gives better service than any swivel I ever used, and I have used every swivel on the market."

So freely does the swivel rotate, even when suspending several tons of drill pipe, that Mr. Hudson found snubbing down or anchoring the swivel was only necessary when starting in extremely cold weather.

When it is realized that the LUCEY Improved Swivel shown in Mr. Hudson's rig has drilled seven holes and, with only a few minor renewals, will continue to give the same satisfying service on many more wells, it brings home the results that a discriminating operator can get by first choosing the right equipment; and second, by the right use of it.



tuling Corporation.

ER THE LUCEY MFG. CO. THERE'S OIL

DISTRICT AGENTS:
Rex Machinery & Supply Co.,—Tulsa-Ardmore. North Texas Supply Co.,—Fort Worth-Graham-Brackenridge. General Supply Co.,—Casper, Wyoming.

TEXAS BY FIELDS

(Continued from page 62)

ORANGE

	Completions	Producers	Failures	Init. Prod.	Monthly Prod.
Jan.	6	5	1	4,825	359,155
Feb.	8	8	..	7,865	222,460
March	13	13	..	40,650	417,910
April	26	25	1	26,075	565,380
May	17	16	1	10,500	507,235
June	17	16	1	16,480	536,775
July	21	18	3	5,035	544,730
Aug.	17	15	2	10,975	545,010
Sept.	18	14	4	12,045	464,910
Oct.	7	7	..	4,065	480,160
Nov.	6	3	3	410	453,870
Dec.	8	6	2	1,705	414,750
Totals '22	164	146	18	140,630	5,492,345
Totals '21	27	25	2	58,870	704,870

PIERCE JUNCTION

Jan.	3	1	2	150	150,070
Feb.	4	3	1	7,000	186,200
March	8	5	3	8,910	211,760
April	3	2	1	1,200	103,320
May	4	1	3	1,000	89,355
June	5	2	3	1,150	95,550
July	2	..	2	.....	77,345
Aug.	2	1	1	200	49,725
Sept.	4	1	3	80	42,600
Oct.	2	..	2	.....	56,345
Nov.	..	..	..	...	41,940
Dec.	..	..	..	...	41,015
Totals '22	47	22	25	42,990	1,145,225
Totals '21	17	13	4	44,000	1,403,940

SARATOGA

Jan.	1	1	..	250	60,790
Feb.	..	..	..	...	56,420
March	1	1	..	15	63,580
April	1	1	..	10	58,260
May	..	..	..	...	50,375
June	3	1	2	5	55,545
July	1	1	..	10	53,105
Aug.	1	1	..	15	50,530
Sept.	1	1	..	10	51,000
Oct.	1	1	..	10	53,630
Nov.	1	..	1	...	53,580
Dec.	1	1	..	15	55,055
Totals '22	12	9	3	340	661,870
Totals '21	30	25	5	1,250	936,695

SOUR LAKE

Jan.	2	2	..	115	142,630
Feb.	1	1	..	10	131,600
March	2	2	..	110	137,640
April	8	7	1	530	135,480
May	2	2	..	30	152,085
June	4	3	1	150	147,225
July	6	5	1	160	144,990
Aug.	6	5	1	210	147,170
Sept.	6	6	..	340	134,850
Oct.	3	3	..	180	144,895
Nov.	1	1	..	300	142,050
Dec.	3	3	..	100	177,070
Totals '22	44	40	4	2,235	1,737,685
Totals '21	9	7	2	165	1,749,625

SPINDLE TOP

Jan.	1	..	1	...	29,430
Feb.	..	..	..	...	23,910
March	1	1	..	60	23,405
April	1	1	..	25	24,960
May	2	1	1	10	25,450
June	3	3	..	70	24,460
July	3	2	1	80	25,050
Aug.	..	..	..	...	26,195
Sept.	4	3	1	30	23,880
Oct.	..	..	..	...	22,280
Nov.	..	..	..	...	22,170
Dec.	1	1	..	2	23,805
Totals '22	16	12	4	272	295,015
Totals '21	16	5	11	235	321,080

Okmulgee District Supplies 20 Per Cent of Oklahoma Total Production

Okmulgee, Okla., Jan. 15.—New high records for crude oil production and for the average first day's production of newly completed wells were made in the Okmulgee district during the year 1922. With the production of the last fifteen days of December estimated, the total production for the district in the year was 18,399,287 barrels of pipe line oil. The previous high record was made in 1920 when this district produced 17,401,316 barrels. In the five years since January 1, 1918, the Okmulgee district has produced a total of 69,109,038 barrels, which sold at the wells for $177,371,036.

The average initial daily production of the producing oil wells completed in this district in the first 11 months of 1922 was 367 barrels per day per well. This compares with an average of 199 barrels per day per well in the year 1921 and 183 barrels per day per well in 1920. Total new production in this district in the first 11 months of 1922 was 219,203 barrels from 598 producing oil wells. This is a new high record for new production in one year. The average first day's production of new wells in the entire state of Oklahoma in the first 11 months of the year was 296 barrels per well and the average in all the fields east of California was 233 barrels per well. The Okmulgee district supplied 20 per cent of the new production in the state during the first 11 months of the year and six per cent of the total in the fields east of California.

Out of a total of 1,082 holes drilled in this district in the first 11 months 70.7 per cent were producing oil or gas wells and 29.3 per cent were dry holes. These figures include all of the extensive wildcatting carried on in the southern part of the district. In more than 15 years of operation there have been 10,283 holes drilled in the Okmulgee district between June 1, 1907 and November 30, 1922. Of this number 6,504, or 63.3 per cent were producing oil wells; 950, or 9.2 per cent were producing gas wells and 2,829 or 27.5 per cent were dry holes. There are now 4,890 producing wells in the district and the present average production is about 40,000 barrels daily.

The Okmulgee district embraces all of Okmulgee, Okfuskee, Hughes, Seminole and McIntosh counties and contains 4000 square miles and about 2,560,000 acres.

WEST COLUMBIA

	Completions	Producers	Failures	Init. Prod.	Monthly Prod.
Jan.	3	3	..	10,500	1,076,505
Feb.	6	4	2	15,850	1,217,580
March	4	3	1	7,750	1,197,655
April	6	4	2	6,700	1,055,880
May	3	3	..	4,275	1,085,310
June	4	4	..	11,500	907,800
July	6	4	2	2,560	865,740
Aug.	8	6	2	7,030	927,830
Sept.	10	7	3	2,160	850,080
Oct.	5	2	3	3,650	845,000
Nov.	2	1	1	2,000	778,950
Dec.	9	8	1	4,055	823,420
Totals '22	66	49	17	78,030	11,631,750
Totals '21	97	77	20	18,265	12,573,450

GULF COAST WILDCATS

Jan.	..	..	..	.....	.....
Feb.	..	..	..	.....	.....
March	2	..	2	.....	.....
April	4	..	4	.....	.....
May	6	2	4	1,800	.....
June	7	..	7	.....	.....
July	10	1	9	25	.....
Aug.	18	1	17	150	.....
Sept.	32	..	32	.....	.....
Oct.	8	1	7	20	.....
Nov.	14	..	14	...	.....
Dec.	6	..	6	...	.....
Totals '22	107	5	102	1,995	.....

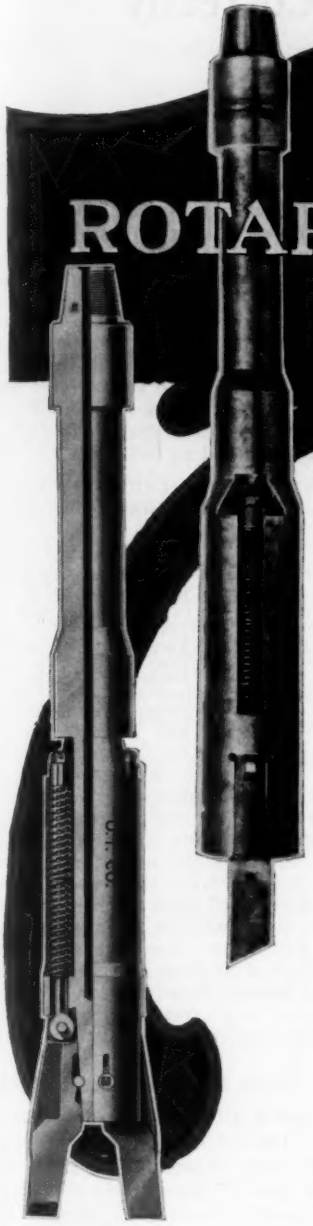
SOMERSET

January	2	2	..	10	54,745
February	3	3	..	15	49,000
March	5	5	..	35	56,175
April	10	10	..	65	54,300
May	9	9	..	45	62,000
June	19	19	..	145	63,750
July	4	4	..	410	89,180
August	22	22	..	255	93,000
September	21	21	..	250	95,700
October	21	21	..	320	110,050
November	31	31	..	285	109,500
December	30	30	..	295	118,110
Totals 1922	177	177	..	2130	955,510

A. C. McLaughlin, a former Texan, and now vice president and general manager of the Associated Oil Company in California, has just been elected president of the Chamber of Mines and Oil, representing oil and mining interests of the West Coast. Other officers elected at the recent meeting were Philip Wiseman, president of the United Eastern Mining Company, vice president; Chester W. Brown of the Union Oil Company of California, second vice president; M. H. Whittier, vice president of the Belridge Oil Company, treasurer. Fifteen directors also were chosen: A. C. Diericx, president of the Honolulu Consolidated Oil Company, D. S. Ewing, I. W. Fuqua, Percy M. Pike, F. C. Ripley, Waller Taylor, F. C. Van Deinse, H. L. Payne, Allard D'Heur, H. H. Hillman, A. B. Macbeth, Theodore Martin, E. J. Miley, Desaix B. Myers and Paul Paine.

IDEAL
ROTARY UNDERREAMER

TYPE "B"
(PATENT PENDING)



The most satisfactory tool yet devised for enlarging and rounding up a hole below the casing.

The use of this Underreamer insures plenty of room in casing, avoiding the delay so commonly experienced with the casing freezing in a tight hole.

The body is forged from a solid billet of special steel, affording rigid construction and maximum life.

The cutters are made of our own water hardening bit steel, of massive, solid construction. Very well adapted to resist the rotary drilling strains.

Made in sizes to run in casing from 6⅝" to 15½".

Prices and full information furnished upon request.

Union Tool Company

TORRANCE, California. BREA, California. TAFT, California. SANTA FE SPRINGS, California. CARNEGIE, Pennsylvania. LONG BEACH, California WEST CHICAGO Illinois

DISTRIBUTORS:

Mid-Continent and Eastern Oil Fields:
The National Supply Companies

California:
Associated Supply Company
The California National Supply Co.
Oil Well Equipment Co.
Thos. H. Pike Co.
Chas. M. Woods Co.

Atlantic Export:
The National Supply Corp., New York.
Foreign:
The National Supply Corp., London.

How to Determine Gravity Correctly

And how to keep it high—Materials used are explained in great detail

By John R. Suman

The large crude oil purchasing companies of the United States are basing their posted price more and more on the specific gravity of the crude oil purchased. In California and Northern Louisiana they have been buying crude oil on a gravity basis for some years and within recent months Mid-Continent crude has been put on this same basis. This new schedule is causing the operators to take a keen interest in the problems of keeping the specific gravity of their crude oil as high as possible. Operators are also taking more interest in methods of determining correct Baume gravity and reducing hydrometer readings to 60 degree Fahrenheit basis.

Method of Reading the Hydrometer

Dr. Roy Cross, in bulletin No. 14 of the Kansas City Testing Laboratories, gives a very good description of the correct method of reading the hydrometer. It is as follows:

"The correct method of reading the hydrometer is illustrated in figures 1 and 2. The sample of oil is placed in a clear glass jar or cylinder and the hydrometer carefully immersed in it to a point slightly below that to which it naturally sinks, and is then allowed to float freely. The reading should not be taken until the oil and the hydrometer are free from air bubbles and are at rest. In taking the reading the eye should be placed slightly below the plane of the surface of the oil (figure 1) and then raised slowly until this surface, seen as an ellipse, becomes a straight line (figure 2). The point at which this line cuts the hydrometer scale should be taken as the reading of the instrument (figure 2)."

After reading the gravity the temperature of the oil is taken. Most hydrometers have a thermometer in them for this purpose.

Temperature Corrections for Determination of True Baume Gravity*

The following tables show the degrees Baume at 60° F. of oils having, at the designated temperatures, the observed degrees Baume indicated. For example, if the degrees Baume is 20.0 at 78° F., the true degrees Baume at 60° F. will be 19.0. Intermediate values not given in the table may be conveniently interpolated. The headings "Observed degrees Baume," and "Observed temperature" indicate the actual reading of the hydrometer and the true temperature of the oil.

*Taken from "Petroleum Production Methods" by John R. Suman.

Methods of Maintaining High Gravity

The problem of maintaining maximum gravity of crude oil after it comes from the well is primarily a problem of keeping evaporation losses as low as possible. J. H. Wiggins in Bulletin No. 200 of the United States Bureau of Mines states that 510,000,000 gallons of gasoline are lost yearly, due to evaporation, before the crude oil produced in the Mid-Continent fields reaches the refineries. This is equivalent to six and two-tenths per cent of the yearly production and is divided as follows:

APPORTIONMENT OF THE LOSS SUSTAINED BY CRUDE ON ITS JOURNEY FROM THE WELL TO THE REFINERY

Location of Loss	Per Cent Volume Evaporated Summer	Autumn Spring	Winter	Avg.	Source of Information
Flow tank	1.2	1.0	0.8	1.0	Estimate helped by test on filling lease tank
Filling lease tank	1.2	1.0	0.8	1.0	Test
Lease storage	1.8	1.4	1.2	1.5	Test
Gathering	1.3	0.9	0.8	1.0	Test
Transportation	1.2	0.9	0.8	1.0	Estimated with help of tank car tests Filling large tank test
Tank farms	0.9	0.7	0.6	0.7	Test
Totals	7.6	5.9	4.9	6.2	

It will be seen from this table that from 3.5 to 4.5 per cent of the total amount of crude oil produced is lost by evaporation before it ever leaves the lease on which it is produced. This means that the producer is losing 35 to 45 barrels out of every 1000 barrels which is run from his lease. In addition to this loss of production he is suffering a loss in the gravity of his oil which may mean that he is losing 20 cents per barrel on every barrel he produces. It is not economically possible to eliminate all of this loss, but it is possible, by taking the proper precautions against evaporation losses, to eliminate at least 75 per cent of them. Numerous cases have recently come to the attention of the writer where operators in North Texas have raised the gravity of their crude oil one to two degrees and increased the volume proportionately, by simply installing gas tight flow and run tanks on their leases. This has been done at very little expense considering the increased revenue realized.

Devises for Preventing Evaporation

Gas Traps: Gas traps connected to flowing and pumping wells should be closely watched to see that plenty of pressure is maintained within the trap. If a pressure of 10 pounds is maintained there will be very little loss of lighter fractions from the crude oil. Some of the manufacturers of gas traps claim that the gauged production of light oil run through their traps will be as much as five per cent more than where the well is allowed to flow into an ordinary "gun barrel" flow tank. Of course there is a corresponding increase in the gravity of the crude oil.

Gas Tight Roofs on Lease Tanks

Almost all of the manufacturers of bolted steel lease tanks are now marketing these tanks with gas tight roofs. These roofs are equipped with pressure regulators for maintaining a constant vapor pressure within the tank of around five ounces. Each manufacturer has his own special design of pressure regulator but they all accomplish the same purpose. The operator should see that he gets a tank that is absolutely gas tight and that the pressure regulator works properly when the tank is being filled and when it is being emptied.

The tests of the United States Bureau of Mines have shown that with 39 gravity Mid-Continent crude oil, stored in 250 barrel tanks, the tanks will save the producer five per cent, even during winter months with the atmos-

pheric temperature close to freezing. The tests also showed that the gravity of the oil in the gas tight tanks decreased only slightly while the open tank lost three degrees in gravity in 12 days. The exact results of the tests are shown in the following table:

EVAPORATION DURING STANDING FULL
Three Tank Test

Tank	Days Stood	% Vol. Evap.	Bbl. Evap.	Dollars Value Lost: As crude at $2.00 per bbl.	Dollars Value Lost: As gasoline 20c per gal.	°Be. Change: From	°Be. Change: To	°Be. Drop	°Be. Part Evap.	Avg. Temp. Oil °F.	Avg. Temp. Atmos. °F.
Open	12	6.35	12.65	25.30	106.30	38.60	36.17	2.43	89.78	39	34
¼" Vent	12	1.21	2.75	5.50	23.10	38.98	38.62	0.36	90.82	41	34
Gas tight tank	12	0.26	0.60	1.20	5.04	39.33	39.26	0.07	91,87	45	34

TABLE FOR CORRECTING GRAVITY READINGS HEAVY OILS

Observed temperature °F	Observed Degrees Baume: 10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0
	Corresponding Degrees Baume at 60° F.									
60	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0
62	9.9	10.9	11.9	12.9	13.9	14.9	15.9	16.9	17.9	18.9
64	9.8	10.8	11.8	12.8	13.8	14.8	15.8	16.8	17.8	18.8
66	9.7	10.7	11.7	12.7	13.7	14.7	15.7	16.7	17.7	18.7
68	9.6	10.6	11.6	12.6	13.6	14.6	15.6	16.6	17.6	18.6
70	9.5	10.5	11.5	12.5	13.5	14.5	15.5	16.5	17.5	18.4
72	9.4	10.4	11.4	12.4	13.4	14.4	15.4	16.4	17.3	18.3
74	9.3	10.3	11.3	12.3	13.3	14.3	15.3	16.2	17.2	18.2
76	9.2	10.2	11.2	12.2	13.2	14.2	15.2	16.1	17.1	18.1
78	9.1	10.1	11.1	12.1	13.1	14.1	15.1	46.0	47.0	48.0
80	9.1	10.0	11.0	12.0	13.0	14.0	14.9	15.9	16.9	17.9
82	9.0	9.9	10.9	11.9	12.9	13.9	14.8	15.8	16.8	17.8
84	8.9	9.8	10.8	11.8	12.8	13.8	14.7	15.7	16.7	17.7
86	8.8	9.8	10.7	11.7	12.7	13.7	14.6	15.6	16.6	17.6
88	8.7	9.7	10.6	11.6	12.6	13.6	14.5	15.5	16.5	17.4
90	8.6	9.6	10.5	11.5	12.5	13.5	14.4	15.4	16.4	17.3
92	8.5	9.5	10.4	11.4	12.4	13.4	14.3	15.3	16.2	17.2
94	8.4	9.4	10.3	11.3	12.3	13.2	14.2	15.2	16.1	17.1
96	8.3	9.3	10.2	11.2	12.2	13.1	14.1	15.1	16.0	17.0
98	8.2	9.2	10.1	11.1	12.1	13.0	14.0	15.0	15.9	16.9
100	8.1	9.1	10.0	11.0	12.0	12.9	13.9	14.9	15.8	16.8
102	8.0	9.0	9.9	10.9	11.9	12.8	13.8	14.8	15.7	16.7
104	7.9	8.9	9.8	10.8	11.8	12.7	13.7	14.7	15.6	16.6
106	7.8	8.8	9.7	10.7	11.7	12.6	13.6	14.6	15.5	16.5
108	7.7	8.7	9.6	10.6	11.6	12.5	13.5	14.5	15.4	16.4
110	7.6	8.6	9.5	10.5	11.5	12.4	13.4	14.4	15.3	16.3
112	7.5	8.5	9.4	10.4	11.4	12.3	13.3	14.3	15.2	16.2
114	7.4	8.4	9.3	10..3	11.3	12.2	13.2	14.1	15.1	16.1
116	7.3	8.3	9.2	10.2	11.2	12.1	13.1	14.0	15.0	16.0
118	7.2	8.2	9.1	10.1	11.1	12.0	13.0	13.9	14.9	15.9
120	7.1	8.1	9.0	10.0	11.0	11.9	12.9	13.8	14.8	15.8
122	7.0	8.0	8.9	9.9	10.9	11.8	12.8	13.7	14.7	15.6
124	6.9	7.9	8.8	9.8	10.8	11.7	12.7	13.6	14.6	15.5
126	6.8	7.8	8.7	9.7	10.7	11.6	12.6	13.5	14.5	15.4
128			8.6	9.6	10.6	11.5	12.5	13.4	14.4	15.3
130			8.5	9.5	10.5	11.4	12.4	13.3	14.3	15.2
132			8.5	9.4	10.4	11.3	12.3	13.2	14.2	15.1
134				9.3	10.3	11.2	12.2	13.1	14.1	15.0
136				9.2	10.2	11.1	12.1	13.0	14.0	14.9
138				9.1	10.1	11.0	12.0	12.9	13.9	14.8
140				9.1	10.0	10.9	11.9	12.8	13.8	14.7
142				9.0	9.9	10.8	11.8	12.7	13.7	14.6
144				8.9	9.8	10.7	11.7	12.6	13.6	14.5
146				8.8	9.7	10.6	11.6	12.5	13.5	14.4
148				8.7	9.6	10.5	11.5	12.4	13.4	14.3
150				8.6	9.5	10.4	11.4	12.3	13.3	14.2

Water Tops for Tanks

In California quite a few tanks are being constructed with tops which allow about eight inches of water to stand on top of the tank. The idea is to keep the tank cool and thereby prevent excessive evaporation of the lighter fractions of the crude oil. This helps some, but unless the tank is gas tight a great amount of loss still goes on.

Floating Roofs

At least one manufacturer is now putting on the market a tank with a floating roof which floats on top of the crude at all times. It is designed with expanding packing around the edges so as to keep water from getting into the tank and to keep air from coming in contact with the surface of the crude oil contained in the tank. This leaves no air space between the top of the tank and the surface of the oil and it is claimed that very little evaporation loss can take place. The manufacturers of this type of tank have demonstrated them by building fires around their tanks when the same were filled with gasoline. The gasoline does not ignite and the evaporation loss during such a demonstration is very slight. The writer does not know whether there are many of these tanks in use in the fields. It seems that the theory of construction is very good but the cost of such a tank is considerably higher than the same tank equipped with a standard gas tight roof.

Foam Solutions for Preventing Evaporation

The Development Department of the Standard Oil Company of New Jersey has developed a chemical solution, of which glycerine, glucose and glue form the basic chemicals, called "Sealite", which when introduced into a tank on top of the oil will prevent the evaporation of the lighter vapors. Enough of the chemical is introduced in the top of the tank to form an air tight blanket in the form of a foam, which rests on top of the oil. Experiments with Sealite have shown that evaporation losses of stored gasoline can be reduced 75 per cent. The principal installations of this process, so far, have been made in tanks of 55,000 barrels capacity and larger, the idea being to hold down evaporation losses in the large tank farms of the pipe line companies. It is understood that the tanks in the Webster tank farm of the Humble Oil and Refining Company south of Houston have been equipped with this compound. The cost per tank is reported to be about $2700.

Insulated Tanks

For many years operators in the Mid-Continent have been housing in wooden and steel lease stock tanks, the idea being to protect the tank from direct rays of the sun, somewhat on the same idea as the water tank roof. A later development of this idea has been the building of air tight jackets around lease tanks. This is a very good idea and certainly prevents a certain amount of evaporation but it is not as effective nor as cheap to install as the gas tight tank. This idea has been further developed and carried to the extreme in the covering of 55,000 barrel tanks with cork or 85 per cent magnesia insulation. The writer is not familiar with the savings effected by such an installation but he doubts very much if the savings would be enough more than those effected in tanks using foam or gas tight roofs to justify the additional expenditure. Of course, it is standard practice, in storing casinghead gasoline, to use gas tight tanks in-

(Continued on page 68.)

Observed temperature in ° F	Observed degrees Baume																			
	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0
	Corresponding degrees Baume at 60° F																			
30	29.0	30.0	31.0	32.0	33.1	34.1	35.2	36.2	37.3	38.3	39.3	40.3	41.4	42.4	43.5	44.5	45.6	46.6	47.7	48.7
32	28.8	29.8	30.9	31.9	33.0	34.0	35.0	36.0	37.1	38.1	39.2	40.2	41.3	42.3	43.4	44.3	45.4	46.4	47.5	48.5
34	28.7	29.7	30.8	31.8	32.8	33.8	34.8	35.8	36.9	38.0	39.0	40.0	41.1	42.1	43.2	44.2	45.3	46.3	47.3	48.3
36	28.5	29.5	30.6	31.6	32.7	33.7	34.7	35.7	36.8	37.8	38.9	39.9	41.0	42.0	43.1	44.0	45.1	46.1	47.2	48.2
38	28.4	29.4	30.5	31.5	32.5	33.5	34.5	35.5	36.6	37.7	38.7	39.7	40.8	41.8	42.9	43.9	45.0	46.0	47.0	48.0
40	28.3	29.3	30.4	31.4	32.4	33.4	34.4	35.4	36.5	37.5	38.5	39.5	40.6	41.6	42.7	43.7	44.8	45.8	46.8	47.8
42	28.2	29.2	30.2	31.2	32.2	33.2	34.3	35.3	36.3	37.3	38.4	39.4	40.5	41.5	42.5	43.5	44.6	45.6	46.6	47.6
44	28.1	29.1	30.1	31.1	32.1	33.1	34.2	35.2	36.2	37.2	38.2	39.2	40.3	41.3	42.4	43.4	44.4	45.4	46.4	47.4
46	27.9	28.9	29.9	30.9	31.9	32.9	34.0	35.0	36.1	37.1	38.1	39.1	40.1	41.1	42.2	43.2	44.2	45.2	46.2	47.2
48	27.8	28.8	29.8	30.8	31.8	32.8	33.9	34.9	35.9	36.9	37.9	38.9	39.9	40.9	42.0	43.0	44.1	45.1	46.1	47.1
50	27.6	28.6	29.7	30.7	31.7	32.7	33.7	34.7	35.7	36.7	37.8	38.8	39.8	40.8	41.8	42.8	43.9	44.9	45.9	46.9
52	27.5	28.5	29.6	30.6	31.6	32.6	33.6	34.6	35.6	36.6	37.6	38.6	39.6	40.7	41.7	42.7	43.7	44.7	45.7	46.7
54	27.4	28.4	29.4	30.4	31.4	32.4	33.4	34.4	35.4	36.4	37.4	38.4	39.5	40.5	41.5	42.5	43.5	44.5	45.5	46.5
56	27.3	28.3	29.3	30.3	31.3	32.3	33.3	34.3	35.3	36.3	37.3	38.3	39.3	40.3	41.3	42.3	43.3	44.3	45.3	46.3
58	27.1	28.1	29.1	30.1	31.1	32.1	33.1	34.1	35.1	36.1	37.1	38.1	39.1	40.1	41.1	42.1	43.1	44.1	45.2	46.2
60	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0
62	26.9	27.9	28.9	29.9	30.9	31.9	32.9	33.9	34.9	35.9	36.9	37.9	38.9	39.9	40.9	41.9	42.9	43.9	44.9	45.9
64	26.7	27.7	28.7	29.7	30.7	31.7	32.7	33.7	34.7	35.7	36.7	37.7	38.7	39.7	40.7	41.7	52.7	43.7	44.7	45.7
66	26.6	27.6	28.6	29.6	30.6	31.6	32.6	33.6	34.6	35.6	36.6	37.6	38.6	39.5	40.5	41.5	42.5	43.5	44.5	45.5
68	26.5	27.5	28.4	29.4	30.4	31.4	32.4	33.4	34.4	35.4	36.4	37.4	38.4	39.4	40.4	41.4	42.4	43.3	44.3	45.3
70	26.4	27.4	28.3	29.3	30.3	31.3	32.2	33.2	34.2	35.2	36.2	37.2	38.2	39.2	40.2	41.2	42.2	43.1	44.1	45.1
72	26.3	27.3	28.2	29.2	30.2	31.2	32.1	33.1	34.1	35.1	36.1	37.1	38.1	39.1	40.0	41.0	42.0	43.0	44.0	45.0
74	26.1	27.1	28.1	29.1	30.1	31.1	32.0	33.0	33.9	34.9	35.9	36.9	37.9	38.9	39.8	40.8	41.8	52.8	53.8	44.8
76	26.0	27.0	27.9	28.9	29.9	30.9	31.8	32.8	33.8	34.8	35.8	36.8	37.8	38.7	39.7	40.7	41.7	42.7	43.6	44.6
78	25.8	26.8	27.8	28.8	29.8	30.8	31.7	32.7	33.6	34.6	35.6	36.6	37.6	38.6	39.5	40.5	41.5	42.5	43.4	44.4
80	25.7	26.7	27.7	28.7	29.7	30.7	31.6	32.6	33.5	34.5	35.5	36.5	37.5	38.5	39.4	40.4	41.3	42.3	43.2	44.2
82	25.6	26.6	27.6	28.6	29.5	30.5	31.5	32.5	33.4	34.4	35.3	36.3	37.3	38.3	39.2	40.2	41.2	42.2	43.1	44.1
84	25.5	26.5	27.5	28.5	29.4	30.4	31.3	32.3	33.2	34.2	35.2	36.2	37.2	38.2	39.1	40.1	41.0	42.0	42.9	43.9
86	25.4	26.4	27.3	28.3	29.2	30.2	31.2	32.2	33.1	34.1	35.1	36.1	37.0	38.0	38.9	39.9	40.9	41.9	42.8	43.8
88	25.2	26.2	27.2	28.2	29.1	30.1	31.0	32.0	33.0	34.0	34.9	35.9	36.9	37.9	38.8	39.8	40.7	41.7	42.6	43.6
90	25.1	26.1	27.0	28.0	29.0	30.0	30.9	31.9	32.9	33.9	34.8	35.8	36.7	37.7	38.6	39.6	40.5	41.5	42.5	43.5
92	25.0	26.0	26.9	27.9	28.9	29.9	30.8	31.8	32.7	33.7	34.6	35.6	36.6	37.6	38.5	39.5	40.4	41.4	42.3	43.3
94	24.9	25.9	26.8	27.8	28.8	29.8	30.7	31.7	32.6	33.6	34.5	35.5	36.4	37.4	38.3	39.3	40.2	41.2	42.2	43.2
96	24.7	25.7	26.7	27.7	28.6	29.6	30.5	31.5	32.5	33.5	34.4	35.4	36.3	37.3	38.2	39.2	40.1	41.1	42.0	43.0
96	24.6	25.6	26.6	27.6	28.5	29.5	30.4	31.4	32.3	33.3	34.2	35.2	36.1	37.1	38.0	39.0	39.9	40.9	41.8	42.8
100	24.5	25.5	26.4	27.4	28.3	29.3	30.3	31.3	32.2	33.2	34.1	35.1	36.0	37.0	37.9	38.9	39.8	40.7	41.6	42.6
102	24.4	25.4	26.3	27.3	28.2	29.2	30.2	31.2	32.1	33.0	33.9	34.9	35.8	36.8	37.7	38.7	39.6	40.6	41.5	42.5
104	24.3	25.3	26.2	27.1	28.1	29.1	30.0	31.0	31.9	32.9	33.8	34.8	35.7	36.7	37.6	38.6	39.5	40.4	41.3	42.3
106	24.2	25.2	26.1	27.0	28.0	29.0	29.9	30.9	31.8	32.7	33.6	34.6	35.5	36.5	37.4	38.4	39.3	40.3	41.2	42.2
108	24.0	25.0	25.9	26.9	27.8	28.8	29.7	30.7	31.6	32.6	33.5	34.5	36.4	36.4	37.3	38.3	39.2	40.1	41.0	42.0
110	23.9	24.9	25.8	26.8	27.7	28.7	29.6	30.6	31.5	32.5	33.4	34.4	35.3	36.3	37.2	38.1	39.0	40.0	40.9	41.8
112	23.8	24.8	25.7	26.7	27.6	28.6	29.5	30.4	31.3	32.3	33.2	34.2	35.1	36.1	37.0	38.0	38.9	39.8	40.7	41.6
114	23.7	24.7	25.6	26.6	27.5	28.4	29.3	30.3	31.2	32.2	33.1	34.1	35.0	36.0	36.9	37.8	38.7	39.7	40.6	41.5
116	23.6	24.6	25.5	26.4	27.3	28.3	29.2	30.2	31.1	32.1	33.0	34.0	34.9	35.9	36.8	37.7	38.6	39.5	40.4	41.4
118	23.4	24.4	25.3	26.3	27.2	28.2	29.1	30.1	31.0	32.0	32.9	33.9	34.8	35.7	36.6	37.5	38.4	39.4	40.3	41.2
120	23.3	24.3	25.2	26.2	27.1	28.1	29.0	30.0	30.9	31.9	32.8	33.7	34.6	35.6	36.5	37.4	38.3	39.2	40.1	41.0

TABLES FOR CORRECTING GRAVITY READINGS MID-CONTINENT CRUDES AND OTHER LIGHT OILS

(NOTE—OTHER TABLES ON PAGES 68 AND 70)

Gulf Refining Company

OKLAHOMA
TEXAS
LOUISIANA

Refiners of PETROLEUM

REFINED OIL
GASOLINE
NAPHTHA
GAS OILS
PARAFFINE WAX
ASPHALT
FUEL OIL
LUBRICATING OILS
CYLINDER
ENGINE
CORDAGE

Red and Pale Paraffine Oils

General Sales Offices: PITTSBURGH, PA.

District Sales Offices:
NEW YORK, HOUSTON, ATLANTA, BOSTON, NEW ORLEANS
PHILADELPHIA

Ocean Terminals

Beverly, Mass.
Gibson's Point, Pa.
Port Tampa, Fla.
Port Arthur, Texas

Bayonne, N. J.
Savannah, Ga.
Gretna, La.
Magazine Point (Mobile), Ala.

Providence, R. I.
Jacksonville, Fla.
Galveston, Texas

TABLES FOR CORRECTING GRAVITY READINGS MID-CONTINENT CRUDES AND OTHER LIGHT OILS
(NOTE—OTHER TABLES ON PAGES 68 AND 70)

How to Determine Gravity Correctly

(Continued from page 65.)

sulated with cork or 85 per cent magnesia, but here we have a product which is extremely volatile and such construction is well justified.

Color of Tanks

Tests have shown that tanks painted in the lighter colors have less evaporation losses than those painted in the dark colors. All other things being equal, less evaporation loss would take place in a tank painted white or gray than in one painted red or black. This is a good point to bear in mind, but one should also remember that on the ordinary lease light colors are extremely hard to maintain, due to the tendency of tanks containing light oil to leak, due to the tarnishing effect of gas, and also due to the fact that pumpers will let tanks run over now and then.

There are very few fields in the United States that do not produce considerable amount of water with the oil. Sooner or later every field develops water troubles which bring up the problem of treating emulsions of water and oil. One of the most common methods of treating emulsions has been to heat it up with steam until the water dropped out. In this process the temperature usually rises so high that the lighter fractions contained in the crude oil are lost by evaporation.

If emulsions are to be treated and the gravity of the crude oil maintained at a high level heating with steam must be done away with. There are very few emulsions in the Mid-Continent that are not amenable to treatment by one of the electrical processes now in use. Almost any of them can also be successfully and cheaply treated by the use of chemicals or filters. Very little loss in gravity will be noted with either of these methods of treatment.

Tables for Correcting Gravity Readings Extra Light Cude Oils

Observed temperature in ° F	Observed degrees Baume 47.0	48.0	49.0	50.0	51.0	52.0	53.0	54.0	55.0	56.0
	Corresponding degrees Baume at 60° F									
30	49.8	50.8	51.9	53.0	54.1	55.1	56.2	57.3	58.4	59.4
32	49.6	50.6	51.7	52.8	53.9	54.9	56.0	57.1	58.2	59.2
34	49.4	50.4	51.5	52.6	53.7	54.7	55.8	56.8	57.9	58.9
36	49.3	50.3	51.4	52.4	53.5	54.5	55.6	56.6	57.7	58.7
38	49.1	50.1	51.2	52.2	53.3	54.3	55.4	56.4	57.5	58.5
40	48.9	49.9	51.0	52.0	53.0	54.1	55.2	56.2	57.2	58.2
42	48.7	49.7	50.8	51.8	52.8	53.8	54.9	56.0	57.0	58.0
44	48.5	49.5	50.6	51.6	52.6	53.6	54.7	55.7	56.8	57.8
46	48.3	49.3	50.4	51.4	52.4	53.4	54.5	55.5	56.5	57.5
48	48.1	49.1	50.2	51.2	52.2	53.2	54.2	55.2	56.3	57.3
50	47.9	48.9	50.0	51.0	52.0	53.0	54.0	55.0	56.1	57.1
52	47.7	48.7	49.8	50.8	51.8	52.8	53.8	54.8	55.9	56.9
54	47.6	48.6	49.6	50.6	51.6	52.6	53.6	54.6	55.6	56.6
56	47.4	48.4	49.4	50.4	51.4	52.4	53.4	54.4	55.4	56.4
58	47.2	48.2	49.2	50.2	51.2	52.2	53.2	54.2	55.2	56.2
60	47.0	48.0	49.0	50.0	51.0	52.0	53.0	54.0	55.0	56.0
62	46.9	47.9	48.8	49.8	50.8	51.8	52.8	53.8	54.8	55.8
64	46.7	47.7	48.6	49.6	50.6	51.6	52.6	53.6	54.6	55.6
66	46.5	47.5	48.4	49.4	50.4	51.4	52.4	53.4	54.4	55.4
68	46.3	47.3	48.3	49.3	50.3	51.3	52.2	43.2	54.2	55.2
70	46.1	47.1	48.1	49.1	50.1	51.1	52.0	53.0	54.0	55.0
72	46.0	47.0	47.9	48.9	49.9	50.9	51.8	52.8	53.8	54.8
74	45.8	46.8	47.7	48.7	49.7	50.7	51.6	52.6	53.5	54.5
76	45.6	46.6	47.5	48.5	49.5	50.5	51.4	52.4	53.3	54.3
78	45.4	46.4	47.3	48.3	49.3	50.3	51.2	52.2	53.1	54.1
80	45.2	46.2	47.2	48.2	49.1	50.1	51.0	52.0	52.9	53.9
82	45.1	46.1	47.0	48.0	48.9	49.9	50.8	51.8	52.7	53.7
84	44.9	45.9	46.8	47.8	48.7	49.7	50.6	51.6	52.5	53.5
86	44.7	45.7	46.6	47.6	48.5	49.5	50.4	51.4	52.3	53.3
88	44.5	45.5	46.4	47.4	48.3	49.3	50.2	51.2	52.1	53.1
90	44.4	45.4	46.3	47.3	48.2	49.2	50.1	51.0	51.9	52.9
92	44.2	45.2	46.1	47.1	48.0	49.0	49.9	50.9	51.8	52.7
94	44.1	45.1	46.0	46.9	47.8	48.8	49.7	50.7	51.6	52.5
96	43.9	44.9	45.8	46.7	47.6	48.6	49.5	50.5	51.4	52.3
98	43.7	44.7	45.6	46.6	47.5	48.4	49.3	50.3	51.2	52.1
100	43.5	44.5	45.4	46.4	47.3	48.3	49.2	50.1	51.0	51.9
102	43.4	44.3	45.2	46.2	47.1	48.1	49.0	49.9	50.8	51.7
104	43.2	44.1	45.0	46.0	46.9	47.9	48.8	59.7	50.6	51.5
106	43.1	44.0	44.9	45.8	46.7	47.7	48.6	49.5	50.4	51.3
108	42.9	43.9	44.8	45.7	46.6	47.5	48.4	49.4	50.3	51.2
110	42.7	43.7	44.6	45.6	46.5	47.4	48.3	49.2	50.1	51.0
112	42.5	43.5	44.4	45.4	46.3	47.2	48.1	49.0	49.9	50.8
114	42.4	43.4	44.3	45.3	46.2	47.1	48.0	48.8	49.7	50.5
116	42.3	43.3	44.2	45.1	46.0	46.9	47.8	48.6	49.5	50.4
118	42.1	43.1	44.0	44.9	45.8	46.7	47.6	48.4	49.3	50.2
120	41.9	42.9	43.8	44.7	45.6	46.5	47.4	48.2	49.1	50.0

Findings of United States Bureau of Mines with Reference to Evaporation Losses of Mid-Continent Crude Oils

The United States Bureau of Mines has conducted very extensive tests on the evaporation losses of crude oils, particularly in the Mid-Continent fields, and the results of their tests are summarized by J. H. Wiggins in bulletin No. 200 as follows:

1. Evaporation during storage and handling causes one of the largest losses of crude petroleum between the well and the refinery.

2. From two-thirds to four-fifths of the evaporation loss may be eliminated by protecting oil from free contact with air. This protection will pay for itself in a short time.

3. The percentage of the original value lost by evaporation is two or three times the percentage of the original volume lost, because the fraction that escapes from the crude oil is the best gasoline and its value per unit of volume is two or three times that of the crude.

4. The maximum prevention of evaporation involves keeping the mixture of air and vapor above the oil at rest and as near a constant temperature, whether high or low, as possible. For example, if the mixture of air and vapor above the oil does not move very little more evaporation will take place at 115 degree F. than at 32 degrees F., because the mixture will soon become saturated and then evaporation will cease.

5. The major part of evaporation loss, when the most valuable products escape, takes place on the lease when the oil is still fresh.

6. Oil is liable to evaporation loss, even after it leaves the lease.

7. Dehydration in open steaming tanks is the most flagrant example of the neglect of evaporation losses. Such plants should be made air-tight with valves for regulating pressures.

8. Overshot connections should never be used for filling a tank.

9. Even in winter, when atmospheric temperatures are low, oil in exposed lease tanks will lose more than one-half what it would lose during similar storage in summer.

10. Oil at the surface of 55,000 barrel tanks, where evaporation takes place, is subjected during a part of the day to temperatures much higher than the average temperature of all the oil in the tank.

We save you this distance by shipping from St. Louis
We save you this distance by shipping from Memphis
ST. LOUIS
PITTSBURGH
MEMPHIS

LINE PIPE
DRILL PIPE
DRIVE PIPE
TUBING
CASING

Pipe From St. Louis or Memphis At Pittsburgh "Through Rates"

We maintain large stocks of pipe at St. Louis and Memphis. These storage facilities enable us to save time and money for Southwestern and Western buyers of oil field pipe.

Pipe that would ordinarily come direct from Pittsburgh mills, we ship from St. Louis or Memphis, thereby cutting down mileage and avoiding the usual freight congestion in the East. You pay nothing extra for this unusually quick service, as Pittsburgh "through rates" apply.

Orders that would ordinarily be shipped from local distributing yards, we can ship from St. Louis or Memphis almost as quickly—and you get the advantage of Pittsburgh "through rate" instead of the higher "combination rate" that applies on local shipments.

Write, wire or phone our nearest office for prices on your pipe requirements.

INTERSTATE PIPE COMPANY

General Offices: Pittsburgh, Pa.

TEXAS HEADQUARTERS
604 American Exch. Bank Bldg., Dallas

OKLAHOMA HEADQUARTERS
815-817 Atlas Life Bldg., Tulsa

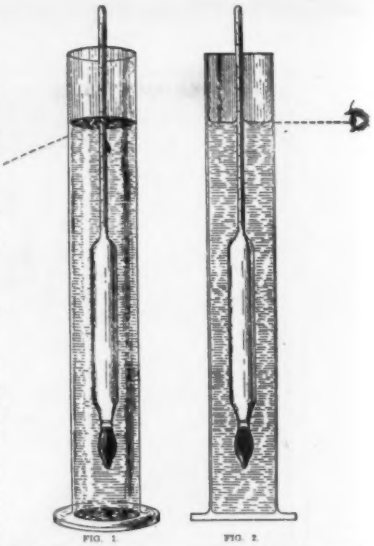
ROCKY MOUNTAIN HEADQUARTERS
412 Midwest Building, Casper, Wyoming

Branch Offices
Wichita Falls, Texas Houston, Texas St. Louis, Mo. Breckenridge, Texas
Mexia, Texas Bartlesville, Okla.

In summer these surface temperatures rise above 100 degrees F. Evidently in such storage the loss by evaporation must be large.

11. For one who handles crude, evaporation is almost as insistent a problem as it is for the refiner who handles the gasoline obtained from this crude, because gasoline in the natural crude will evaporate approximately one-half as rapidly as it will after being distilled and stored as pure gasoline.

12. Light crude oil from the Ranger, Texas, fields evaporates about as rapidly as pure gasoline derived from El Dorado, Kans., crude, provided the gravity of the fraction evaporating is the same. This means that the evaporation problem of the producer or the operator of a pipe line handling the Texas crude is as important as that of the refiner handling the Kansas gasolines.



Illustrating correct method of reading Baume gravity from Hydrometer

13. The evaporation problem of those who handle Ranger, Texas, or Coalinga, Cal., light crude, is twice as insistent as the problem of those who handle El Dorado, Kansas, crudes.

14. The more volatile the gasoline contained in a crude, the more nearly will the rate of evaporation of the crude approach the rate of evaporation of the gasoline (stored in the pure state) distilled from the crude, evaporating conditions in both cases being the same.

15. The increasing demand for crude oil and gasoline is making this problem more and more insistent. In future it may be considered as illegal to waste oil brought to the surface, as it is now considered illegal to waste it underground.

16. So many conditions vary the rate of evaporation that to cover them all would require an almost unlimited amount of work. Each operator of a lease or pipe line should attack and solve his own problem.

Observed temperature in ° F	Observed degrees Baume 17.0	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
	Corresponding degrees Baume at 60° F									
30	18.6	19.7	20.7	21.7	22.7	23.7	24.8	25.8	26.9	27.9
32	18.6	19.6	20.6	21.6	22.6	23.6	24.7	25.7	26.8	27.8
34	18.5	19.5	20.5	21.5	22.5	23.5	24.6	25.6	26.7	27.7
36	18.3	19.4	20.4	21.4	22.4	23.4	24.5	25.5	26.5	27.5
38	18.2	19.3	20.3	21.3	22.3	23.3	24.4	25.4	26.4	27.4
40	18.1	19.1	20.1	21.2	22.2	23.2	24.2	25.2	26.2	27.2
42	18.0	19.0	20.0	21.1	22.1	23.1	24.1	25.1	26.1	27.1
44	17.9	18.9	19.9	20.9	21.9	22.9	23.9	24.9	26.0	27.0
46	17.8	18.8	19.8	20.8	21.8	22.8	23.8	24.8	25.9	26.9
48	17.6	18.7	19.7	20.7	21.7	22.7	23.7	24.7	25.8	26.8
50	17.5	18.6	19.6	20.6	21.6	22.6	23.6	24.6	25.6	26.6
52	17.4	18.5	19.5	20.5	21.5	22.5	23.5	24.5	25.5	26.5
54	17.3	18.3	19.3	20.3	21.3	22.3	23.3	24.3	25.4	26.4
56	17.2	18.2	19.2	20.2	21.2	22.2	23.2	24.2	25.3	26.3
58	17.1	18.1	19.1	20.1	21.1	22.1	23.1	24.1	25.1	26.1
60				20.0	21.0	22.0	23.0	24.0	25.0	26.0
62				19.9	20.9	21.9	22.9	23.9	24.9	25.9
64				19.8	20.8	21.8	22.8	23.8	24.7	25.7
66				19.7	20.7	21.7	22.7	23.7	24.6	25.6
68				19.5	20.5	21.5	22.5	23.5	24.5	25.5
70				19.4	20.4	21.4	22.4	23.4	24.4	25.4
72				19.3	20.3	21.3	22.3	23.3	24.3	25.3
74				19.2	20.2	21.2	22.2	23.2	24.1	25.1
76				19.1	20.1	21.1	22.1	23.1	24.0	25.0
78				19.0	19.9	20.9	21.9	22.9	23.9	24.9
80				18.9	19.8	20.8	21.8	22.8	23.8	24.8
82				18.8	19.7	20.7	21.7	22.7	23.7	24.7
84				18.7	19.6	20.6	21.6	22.6	23.5	24.5
86				18.6	19.5	20.5	21.5	22.5	23.4	24.4
88				18.4	19.4	20.4	21.3	22.3	23.3	24.3
90				18.3	19.3	20.3	21.2	22.2	23.2	24.2
92				18.2	19.2	20.2	21.1	22.1	23.1	24.1
94				18.1	19.1	20.1	21.0	22.0	23.0	24.0
96				18.0	19.0	20.0	20.9	21.9	22.8	23.8
98				17.9	18.8	19.8	20.8	21.8	22.7	23.7
100				17.8	18.7	19.7	20.7	21.7	22.6	23.6
102				17.7	18.6	19.6	20.5	21.5	22.5	23.5
104				17.6	18.5	19.5	20.4	21.4	22.4	23.4
106				17.5	18.4	19.4	20.3	21.3	22.3	23.3
108				17.3	18.2	19.2	20.2	21.2	22.2	23.1
110				17.2	18.1	19.1	20.1	21.1	22.0	23.0
112				17.1	18.0	19.0	20.0	21.0	21.9	22.9
114				17.0	17.9	18.9	19.9	20.9	21.8	22.8
116				16.9	17.8	18.8	19.8	20.8	21.7	22.7
118				16.8	17.7	18.7	19.6	20.6	21.5	22.5
120				16.7	17.6	18.6	19.5	20.5	21.4	22.4

Table for Correcting Gravity Readings Medium Heavy Oils

FIELD MANAGERS—A Large British Oil Company operating in the East expects to require the services of a Fields Manager within the next six or seven months, and is prepared to consider applications from British subjects who have had lengthy experience in a similar capacity.

Applicants must be thoroughly conversant with all methods of drilling and production, and accustomed to handling American and other labor.

Preference will be given to applicants with Mechanical and Civil Engineering experience.

It is particularly requested that only candidates with the experience detailed above should reply.

Applications must be supported by full evidence of experience, also details of education, age, etc.

A man possessing the above qualifications might be taken on immediately in the position of understudy.

Apply FIELDS MANAGER, The Oil Weekly

Tampico, Jan. 6.—The Texas Company has started flowing its No. 1 Paz at Valdes for close to 10,000 barrels a day. One storage tank has been erected and a larger one will be erected at once.

Berlin, January 1.—According to reports from Bucarest a group of French and English banking houses have requested the Roumanian government for granting of concessions for the oil output in public districts.

Water Top Storage Tanks

A type construction that is not new, having long been in use, but under present conditions forcing consideration from the standpoint of ECONOMY, due to almost entire elimination of damage by fire and by evaporation.

We are now building several 55's for Mid-Continent refiners. An investment that will produce earnings. Let us quote you.

United Iron Works, Inc.

KANSAS CITY, MO.

Sales Office
Tulsa, Okla.

Sales Office
Dallas, Texas.

Crude Prices Not Subject to Manipulation

Curves of prices show no relation to production, consumption and stocks

By Arthur Knapp

The best evidence that the field price of crude oil is not subject to manipulation is the fact that the curves of such prices show no relation to the curves of volume of production, consumption or stocks. This is disappointing to many who take up the study of petroleum statistics for the first time and who hope to find a curve which parallels the price curve and from which they will be able to predict future prices. It is a fallacy to attempt to predict prices by past performance as there are too many variables.

What, then, influences price, if the volume of stocks, etc., is not the criterion? What is the psychology of price making? The accompanying curves show the price of Mid-Continent crude and the ratio of the rate at which consumption for any month increases or decreases as compared to the rate at which the total liquid stocks increase or decrease during the same month. When the dotted curve moves up consumption is increasing at a greater rate than stocks. When the curve moves down stocks are increasing faster than consumption increases.

A large or sustained change in the ratio of the rate of increase in stocks vs. the rate of increase in consumption seems to be very influential in bringing about changes in price.

During 1918 the rate at which consumption increased outpaced stock accumulations would seem to have warranted a rise in price late in 1918. As a matter of fact, the average price for the whole country did rise in the second quarter of 1918 and fall slightly in the second quarter of 1919. The approach of the slack season probably had the effect of holding off an increase in price late in 1918 and the drop in the ratio curve up to the middle of 1919 shows that a general rise in price was not warranted.

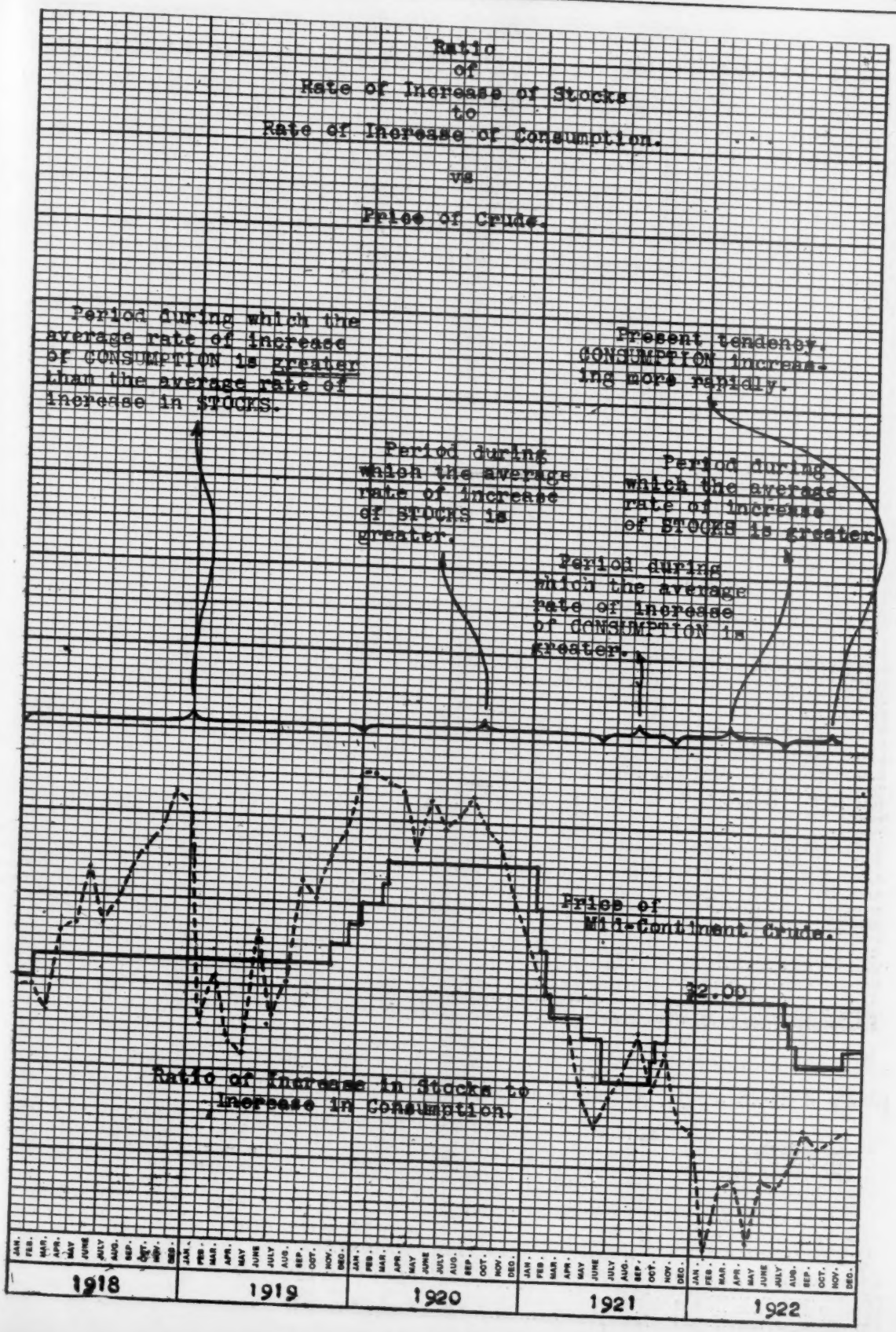
In the latter part of 1919 the rate at which consumption was increasing was so much greater than the rate for stocks that a rise in price was necessary. This rise accumulated a momentum which carried prices too high, so that it was only necessary for the rate of stock accumulation to increase slightly in comparison to the rate of consumption increase to bring about a drop in prices early in 1921.

Again a momentum carried prices too fast. The regularity with which stock accumulations outstripped consumption increase for the entire period from August, 1920, to May, 1921, was what carried prices so far. The price reached in June, 1921, was too low for the safety of the industry and only a small upward movement in the ratio of the rates of increase was necessary to bring prices up again in September, 1921.

During the early part of 1922 there was every reason to drop prices. There was, however, a decided tendency on the part of the whole petroleum industry to stabilize prices. Also the Mexican situation was such that relief from that quarter was momentarily expected.

Judging from the curve of ratios of rate of increase and also considering the rapid rate at which production was increasing during the early part of 1922, a drop in price was warranted in March, 1922. If there had been such a drop in March, there would be a tendency to increase prices at the present time. Prices could have moved up in August and be higher than they are now. Since we are approaching the season of smallest consumption, the upward tendency of the curve of ratios will have to continue for some months or mount rapidly to affect prices for the next few months. Preliminary statistics for September and October indicate that consumption and stocks are increasing at about the same rate.

FOXBORO ORIFICE METER
A rugged, accurate Orifice Meter for measuring Casinghead Gas, Natural Gas, Oil, Steam, Gasoline, Water. Write for Bulletin N-113.
THE FOXBORO CO., Inc.
Foxboro, Mass., U. S. A.
213 S. Cincinnati Ave. Tulsa, Okla.
118-159
FOXBORO


Ratio
of
Rate of Increase of Stocks
to
Rate of Increase of Consumption.
vs
Price of Crude.
Period during which the average rate of increase of CONSUMPTION is greater than the average rate of increase in STOCKS.
Present tendency. CONSUMPTION increasing more rapidly.
Period during which the average rate of increase of STOCKS is greater.
Period during which the average rate of increase of STOCKS is greater.
Period during which the average rate of increase of CONSUMPTION is greater.
Price of Mid-Continent Crude.
$2.00
Ratio of Increase in Stocks to Increase in Consumption.
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEP. OCT. NOV. DEC.
1918
1919
1920
1921
1922

SOUTHWESTERN CRUDE PRICES 1913 TO JAN. 1, 1923

The following table shows the various crude price changes in Oklahoma, Texas, Kansas, Louisiana and Arkansas back to 1913 and up to December 31, 1922.

MID-CONTINENT FIELDS

KANSAS AND OKLAHOMA

1913
January 10 ..... .83
February 1 ..... .88
July 10 ..... .93
July 22 ..... .98
September 1 ..... 1.03
1914
February 10 ..... 1.05
April 8 ..... 1.00
April 10 ..... .95
April 13 ..... .90
April 15 ..... .85
April 27 ..... .80
April 30 ..... .75
September 12 ..... .65
September 22 ..... .55
1915
February 8 ..... .45
February 15 ..... .40
August 3 ..... .50
August 4 ..... .55
August 11 ..... .60
August 21 ..... .75
September 11 ..... .80
November 13 ..... .90
November 15 ..... 1.00
December 14 ..... 1.20
1916
January 20 ..... 1.25
January 26 ..... 1.30
March 4 ..... 1.40
March 11 ..... 1.45
March 14 ..... 1.55
July 25 ..... 1.45
July 29 ..... 1.35
August 1 ..... 1.25
August 7 ..... 1.15
August 12 ..... 1.05
August 15 ..... .95
August 26 ..... .90
December 12 ..... 1.10
December 18 ..... 1.20
December 23 ..... 1.30
December 28 ..... 1.40
1917
January 3 ..... 1.50
August 15 ..... 1.90
August 18 ..... 2.00
1918
March 19 ..... 2.25
1919
November 20 ..... 2.50
December 20 ..... 2.75
1920
January 6 ..... 3.00
February 27 ..... 3.25
March 1 ..... 3.50
1921
January 24 ..... 3.00
January 31 ..... 2.50
February 4 ..... 2.00
February 9 ..... 1.75
May 2 ..... 1.50
June 11 ..... 1.25
June 13 ..... 1.00
September 30 ..... 1.25
October 3 ..... 1.50
†October 8 ..... 1.75
..... 1.50
November 7 ..... 2.00
†November 7 ..... 2.25
1922
July 15 ..... 1.75
July 18 ..... 1.50
August 2 ..... 1.25
†September 7 ..... 1.50
November 22:
Below 28° ..... .90
28 to 29.9° 1.00
30 to 32.9° 1.00
33 to 34.9° 1.25
35 to 36.9° 1.40
37 to 38.9° 1.60
39° and above 1.80
41° and above 2.00

†Gulf only for 38° and above, also Texas Company.

HEALDTON

1914
March 26 ..... .70
April 13 ..... .60
May 1 ..... .50
October 1 ..... .40
October 20 ..... .50
1915
February 15 ..... .30
September 25 ..... .35
October 12 ..... .40
November 1 ..... .45
December 1 ..... .55
December 14 ..... .60
1916
January 26 ..... $0.75
March 4 ..... .80
July 26 ..... .70
July 29 ..... .60
August 1 ..... .50
August 15 ..... .45
December 12 ..... .50
December 19 ..... .60
December 23 ..... .70
December 28 ..... .75
1917
January 4 ..... .80
August 15 ..... 1.15
August 18 ..... 1.20
1918
March 16 ..... 1.45
1919
February 21 ..... 1.20
November 21 ..... 1.35
December 20 ..... 2.00
1920
January 6 ..... 2.25
February 27 ..... 2.50
March 3 ..... 2.75
1921
January 18 ..... 2.25
January 24 ..... 1.75
January 31 ..... 1.25
February 4 ..... 1.00
June 4 ..... .75
(Includes Walters and Beaver Creek)
June 21 ..... .60
September 30 ..... .70
October 4 ..... .80
November 7 ..... 1.30
(Cement and Walters take own rating.)
December 15 ..... 1.65
1922
January 14 ..... 1.30
July 15 ..... 1.05
July 18 ..... .85
July 19 ..... .75

HEWITT

1919
June 5 ..... 1.35
December 2 ..... 1.75
December 22 ..... 2.75
1920
January 6 ..... 3.00
February 27 ..... 3.25
March 1 ..... 3.50
1921
January 24 ..... 3.00
January 31 ..... 2.50
February 4 ..... 2.00
February 9 ..... 1.75
May 2 ..... 1.50
June 11 ..... 1.25
June 13 ..... 1.00
September 30 ..... 1.25
October 3 ..... 1.50
November 7 ..... 2.00
1922
July 15 ..... 1.75
July 18 ..... 1.50
August 2 ..... 1.25

CUSHING—Above 38 Gravity

(Also Hominy Crude of same grade.)
1917
January 15 ..... 1.95
August 15 ..... 2.15
August 18 ..... 2.25
1918
March 19 ..... 2.50
1919
December 20 ..... 2.75
Takes regular Oklahoma-Kansas posted price.

CEMENT

1921
November 8 ..... 1.10
December 15 ..... 1.30
1922
July 18 ..... 1.10
July 19 ..... 1.00
August 4 ..... .85

WALTERS

1921
November 8 ..... .95
December 15 ..... 1.30
1922
January 14 ..... 1.00
July 18 ..... .85
July 19 ..... .75

NORTH AND CENTRAL WEST TEXAS

NORTH TEXAS DIVISION

1911
January 1 ..... .55
August 1 ..... .48
September 15 ..... .50
1912
January 2 ..... .53
January 15 ..... .55
January 27 ..... .57
February 5 ..... .60
April 19 ..... .65
May 7 ..... .66
May 17 ..... .68
July 1 ..... .70
July 15 ..... .72
July 20 ..... .75
November 15 ..... .80
December 14 ..... .85
December 26 ..... .88
1913
January 9 ..... .90
January 29 ..... .95
July 24 ..... 1.00
August 25 ..... 1.05
1914
April 14 ..... .95
April 20 ..... .85
May 5 ..... .75
September 22 ..... .65
October 6 ..... .60
November 21 ..... .55
1915
April 1 ..... .45
August 3 ..... .55
August 6 ..... .60
August 13 ..... .65
August 20 ..... .70
August 27 ..... .75
September 14 ..... .80
November 13 ..... .90
November 15 ..... 1.00
December 14 ..... 1.20
1916
January 21 ..... 1.25
January 27 ..... 1.30
March 4 ..... 1.40
March 13 ..... 1.45
March 14 ..... 1.55
July 14 ..... 1.45
August 1 ..... 1.35
August 2 ..... 1.25
August 8 ..... 1.15
August 14 ..... 1.05
August 16 ..... .95
August 26 ..... .90
August 29 ..... 1.00
December 12 ..... 1.10
December 18 ..... 1.20
December 23 ..... 1.30
December 29 ..... 1.40
1917
January 3 ..... 1.50
January 8 ..... 1.60
January 13 ..... 1.70
August 17 ..... 1.90
August 20 ..... 2.00
1918
March 20 ..... 2.25
1919
November 20 ..... 2.50
December 20 ..... 2.75
1920
January 6 ..... 3.00
February 27 ..... 3.25
March 1 ..... 3.50
1921
January 24 ..... 3.00
January 31 ..... 2.50
February 4 ..... 2.00
February 9 ..... 1.75
May 2 ..... 1.50

Kansas City Structural Steel Company

"Nearest the Field"

—Our location at Kansas City, a point within the Mid-Continent Field
—A stock of 8000 tons especially selected to meet the needs of the Oil Industry
—A shop fabricating capacity of 5000 tons per month
—And direct rail connections with every oil field

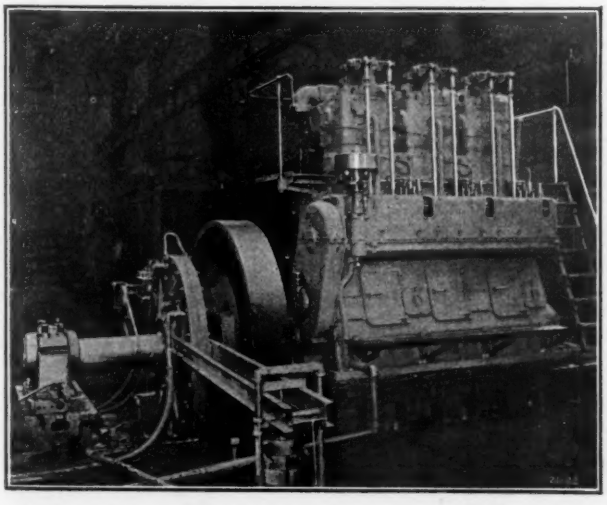
enable us to make second and third morning delivery to Oklahoma and North Texas points. Fifth and sixth morning delivery to Gulf Coastal points.

5000 to 55,000 Barrel Tanks completely fabricated for immediate shipment

GENERAL OFFICE AND PLANT
21st and Metropolitan Ave.
KANSAS CITY, KANSAS

SALES OFFICES
809 Daniels Bldg., TULSA, OKLA.
703 Orear Leslie Bldg., KANSAS CITY, MO.

DE LA VERGNE OIL ENGINES



A 200 H. P. De La Vergne Type "SI" Vertical Diesel Engine

The vertical type "SI" De La Vergne oil engine is built in sizes from 130 H. P. to 400 H. P., with speeds suited to standard generator practice.

The De La Vergne type "SI" oil engine has shown that the highest possible economy and the ability to burn any kind of commercial fuel oil, can be accomplished without the use of the troublesome air compressor. Consequently this vertical engine excells all other designs in simplicity—operating as it does with a single pump injection principle—and designed on the same substantial lines as the De La Vergne horizontal engine.

Send for Our Bulletin

De La Vergne Machine Co.

2104 East 138th Street, New York, N. Y.
De La Vergne Engine Co., Agents
Houston, Texas

June 4	1.25
June 21	1.00
September 30	1.25
October 3	1.50
October 7	1.75
November 7	2.25
1922	
July 15	2.00
July 20	1.75
August 2	1.50
November 22:	
Below 28°	$ .90
28° to 29.9°	1.00
30° to 32.9°	1.10
33° to 34.9°	1.25
35° to 36.9°	1.40
37° to 38.9°	1.60
39° and above	1.80

CORSICANA

1913	Light	Heavy
January 1	.88	.70
January 10	.90	
February 1	.95	
April 15		.80
August 1	1.00	
September 1	1.05	
1914		
March 10		.70
April 10		.60
April 20	.85	
May 1		.50
May 10	.75	
October 1	.75	
October 20	.60	
November 15	.55	
1915		
March 1	.45	.40
August 3	.55	
August 15	.65	
September 1	.75	
September 15	.80	
October 15	1.00	
December 1		.55
December 14	1.20	
1916		
January 1		.60
January 15		.65
February 1	1.25	.75
February 15	1.30	
March 15	1.55	
April 1		.80
July 15	1.45	
August 1	1.25	.60
August 15	.95	
September 1	.90	
September 15		.40
December 1	1.00	.50
1917		
January 1	1.40	
January 15	1.70	.85
October 1	2.00	1.05
1918		
March 20	2.25	1.30
1919		
February 21		1.05
November 21		1.15
December 18	2.50	
December 23	2.75	1.30
1920		
January 6		1.55
March 1	3.00	1.75
1921		
January 18	3.00	2.00
January 25	2.50	1.50
January 31	2.00	1.00
February 4	1.50	.75
June 4	1.00	.50
June 21	.85	.50
September 30	.95	.60
October 4	1.05	.70
November 8	1.15	.85
December 15	1.30	.95

1922		
January 14	1.30	.75
July 18	1.10	.75
July 19	1.00	.65

MEXIA

1921	
October 10	.60
November 8	.75
December 13	1.00
1922	
January 14	1.25
March 17	1.50
July 20	1.25
December 15	1.35

CURRIE

1922	
July 13	1.75
July 20	1.50
December 15	1.60

NORTH LOUISIANA

HAYNESVILLE

1921	36°+	34°+	32°+	32°—
June	.75	.65	.60	.50
Oct. 5	1.00	.90	.85	.75

	34°+	34°—
October	1.35	1.25
November 8	1.85	1.75
1922		
July 18	1.60	1.50
July 19	1.35	1.25
August 3	1.10	1.00

	33°+	33°—
August 25	1.10	1.00

BELLEVUE

1922	
February 27	1.00
July 18	.75

HOMER

1919	38°+	35°+	32°+	32°—
May 2	2.15			
June 5	2.25	2.15	2.15	.75
Aug. 8			2.10	1.00
Dec 18	2.50	2.40	2.35	1.25
Dec 23	2.75	2.65	2.60	1.50
1920				
Jan 6	3.00	2.90	2.85	1.75
Feb. 27	3.25	3.15	3.10	2.00
Mar 15	3.50	3.40	3.35	2.25
1921	36°+	35°+	32°+	32°—
Jan 25	2.75	2.65	2.60	1.25
Feb 1	2.25	2.15	2.10	1.25
Feb. 3	2.25	2.15	2.10	1.25
Feb 8	1.75	1.65	1.60	1.25
May 3	1.50	1.40	1.35	1.00
June 15	1.25	1.15	1.10	.75
June 17	1.00	.90	.85	.50
Oct. 5	1.25	1.15	1.10	.75
Oct 7	1.50	1.40	1.35	1.00
Nov 8	2.00	1.65	1.60	1.50
1922	36°+	34°+	32°+	32°—
July 18	1.75	1.40	1.35	1.25
July 19	1.50	1.40	1.35	1.00
Aug 3	1.25	1.15	1.10	.75

	35°+	33°+	31°+	31°—
Aug 25	1.25	1.15	1.10	.75

HAYNESVILLE, HOMER AND CADDO

1922	
Dec. 5	
39 gravity and above	$1.80
37 to 38.9 gravity	1.60
35 to 36.9 gravity	1.40
33 to 34.9 gravity	1.25
30 to 32.9 gravity	1.10
Below 30 gravity	.75

BULL BAYOU

1919	38°+	35°+	32°+	32°—
Aug 12	1.90	1.80	1.75	.75
Dec 18	2.15	2.05	2.00	1.00
Dec 23	2.40	2.30	2.25	1.25
1920				
Jan 6	2.65	2.55	2.50	1.50
Feb 27	2.90	2.80	2.75	1.75
Mar 16	3.35	3.05	3.00	2.00
1921				
Jan 25	2.65	2.55	2.50	1.50
Feb 1	2.15	2.05	2.00	1.25
Feb 8	1.65	1.55	1.50	1.25
May 3	1.40	1.30	1.25	1.00
June 15	1.15	1.05	1.00	.75
June 17	.90	.80	.75	.50
Oct 5	1.15	1.05	1.00	.75
Oct 7	1.40	1.30	1.25	
Nov 8	1.90	1.80	1.75	
1922				
July 18	1.65	1.55	1.50	
July 19	1.40	1.30	1.25	
Aug 3	1.15	1.05	1.00	

	38°+	35°+	32°+
Dec 16	1.35	1.30	1.25

DE SOTO

1914	
August 8	.90
August 12	.85
September 1	.80
1915	
February 19	.70
March 3	.60
March 24	.50
August 27	.55
September 15	.60
September 22	.65
October 7	.70
November 19	.80
November 20	.90
December 17	1.00
December 20	1.10
1916	
January 25	1.15
January 28	1.20
March 8	1.30
March 15	1.35
March 27	1.45
July 26	1.35
August 1	1.25
August 2	1.15
August 8	1.05
August 14	.95
August 16	.85
August 26	.80
November 29	.90
December 12	1.00
December 18	1.10
December 26	1.20
December 29	1.30
1917	
January 3	1.40
January 8	1.50
January 13	1.60
August 22	1.90
1918	
March 20	2.15
December 20	2.40
December 23	2.65
1920	
January 6	2.90
February 27	3.15
March 16	3.40
1921	
January 25	2.90
February 1	2.40
February 8	1.90
May 3	1.65
June 15	1.40

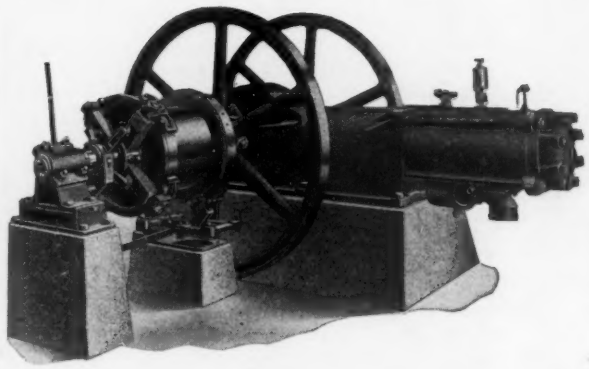
June 17	1.15
October 5	1.25
October 7	1.40
.. ..	1.50
November 8	2.00
1922	
July 18	1.75
July 19	1.50
August 3	1.25
December 16	1.60

CADDO

1913	Light	Heavy
January 1	.91	.70
January 10	.93	
February 1	.98	
July 1		.75
July 10	1.00	
September 1	1.05	
1914		
March 10		.70
April 1		.60
April 20		.50
July 9	1.00	
July 28	.95	
August 12	.85	
August 8		.45
September 1	.80	
1915		
February 19	.70	
March 25		.35
August 27	.65	.40
September 15	.70	.45
September 22	.75	.50
October 7	.80	.55
November 11	.90	.65
November 20	1.00	
December 14		.75
December 17	1.10	
December 28	1.20	
1916		
January 25	1.25	.85
January 28	1.30	.90
March 8	1.40	
March 15	1.45	
March 27	1.55	
July 14		.80
July 26	1.45	.70
July 27		.65
August 1	1.35	
August 2	1.25	
August 8	1.15	
August 14	1.05	
August 16	.95	
August 26	.90	
November 29	1.00	
December 12	1.10	
December 14		.75
December 18	1.20	
December 26	1.30	
December 27		.85
December 29	1.40	
1917		
January 3	1.50	
January 8	1.60	
January 13	1.70	
March 15	1.80	1.00
April 1	1.90	
August 22	2.00	
1918		
March 20	2.25	1.25
August 1		1.55
1919		
January 16		1.25
February 6		1.00
March 24		.75
December 20	2.50	1.00
December 23	2.75	1.25
1920		
January 6	3.00	1.50
February 27	3.25	1.75
March 16	3.50	2.00

Franklin Valveless Gas Engines

Have minimum parts. Require fewer adjustments. Eliminate valve grinding. Construction keeps out all sand and grit. Saves 75 per cent in lubrication cost over other type engines.



Franklin Type "S" Reversible Clutch

A strong, reliable, self-oiling, quiet running clutch—requiring little or no attention after once installed.

Well constructed—all parts are interchangeable. Lubrication of pulley, bushings and gears automatic and positive in action.

There is no better clutch made for oil field service than the FRANKLIN type 'S!

Descriptive Bulletins On Request

Distributed in Oklahoma, Kansas, Texas, Louisiana and Arkansas by
ATLAS SUPPLY COMPANY, MUSKOGEE, OKLA., and Branches.
Ohio and West Virginia by
NEW MARTINSVILLE SUPPLY COMPANY, NEW MARTINSVILLE, W. VA.

FRANKLIN VALVELESS ENGINE COMPANY

Franklin - - - - Penna.

TEXACO

Petroleum and its Products

HIGH GRADE UNIFORM QUALITY

Gasoline	Red Oils	Bunker Oils	Cup Grease
Naphtha	Pale Oils	Cylinder Oils	Gear Grease
Kerosene	Floor Oils	Cylinder Stocks	Axle Grease
Signal Oils	Paraffin Oils	Gear Lubricants	Solid Lubricants
Distillates	Wax-Oil Stock	Wire Rope Lubricants	Petroleum Coke
Gas Oils	Oil Soap	Waxes	Metal Polishes
Spindle Oils	Miners' Oil	Asphalts	Roofing Paper
Motor Oils	Black Oil	Road Oils	Roofing
Engine Oils	Car Oil	Asphalt Cement	Roofing Cement
Machine Oils	Fuel Oils	Pipe Coating	
Dynamo Oils	Diesel Fuels	Greases	

THE TEXAS COMPANY

New York 17 Battery Place
Chicago McCormick Bldg.
Houston The Texas Co. Bldg.

Offices in Principal Cities

Export Dept. 17 Battery Place, New York

May 5	3.50			2.25
1921	38°+	35°+	32°+	heavy
Jan 25	3.00	2.90	2.85	1.50
Feb 1	2.50	2.40	2.35	1.25
Feb 8	2.00	1.90	1.85	1.25
May 3	1.75	1.65	1.60	1.25
May 5	1.75	1.65	1.60	1.00
June 15	1.50	1.40	1.35	1.00
June 17	1.25	1.15	1.10	.80
June 18	1.25	1.15	1.10	.60
Oct 5	1.25	1.15	1.10	.85
Oct. 8	1.50	1.40	1.35	1.10
Nov 8	2.00	1.90	1.85	1.25
1922	38°+	35°+	32°+	heavy
July 18	1.75	1.65	1.60	1.00
July 19	1.50	1.40	1.35	.75
Aug 3	1.25	1.15	1.10	.75

CRICHTON

1915	
July 14	.45
July 15	.35
August 27	.45
September 15	.50
September 22	.55
October 7	60
November 19	.70
November 20	.80
December 17	.85
1916	
January 25	.90
January 28	.95
March 8	1.00
June 10	.90
June 21	.80
July 14	.70
July 27	.65
August 29	.60
December 1	.70
December 12	.80
December 18	.90
December 26	1.00
December 29	1.10
1917	
January 3	1.20
January 8	1.30
February 15	1.40
August 22	1.50
1918	
March 20	1.75
1919	
December 20	2.00
December 23	2.25
1920	
January 6	2.50
February 27	2.75
March 16	3.00
1921	
January 25	2.50
February 1	2.00
February 8	1.50
May 3	1.25
June 15	1.00
June 17	.75
October 5	1.00
October 7	1.25
November 8	1.75
1922	
July 18	1.50
July 19	1.25
August 3	1.00

VIVIAN

1913	
January 10	.70
July 1	.75
1914	
March 10	.70
April 20	.50
August 20	.45
1915	
September 1	.40
September 15	.45
October 7	.55
November 19	.65
December 14	.75
1916	
January 1	.80
February 1	.90
July 14	.80
July 27	.65
December 8	.75
December 20	.85
1917	
April 1	1.00
1918	
February 15	1.35
August 1	*1.80
1919	
January 14	1.50
February 14	1.25
March 22	1.00
November 29	1.25
December 20	1.50
1920	
January 6	1.75
February 19	2.00
March 2	2.25
March 4	2.50
April 13	3.00

*Oil Division U. S. Fuel Administration.

ARKANSAS FIELDS

EL DORADO

	35°+	33°+	33°—
May 13	.70	.60	.50
September 3	.80	.70	.60
September 23	.90	.80	.70
	34°+	34°—	
October 5	1.25	1.15	
October 7	1.50	1.40	
November 8	2.00	1.75	
1922			
July 18	1.75	1.50	
July 19	1.50	1.25	
August 3	1.25	1.00	
	33°+	33°—	
August 25	1.25	1.00	
December 5			
35 to 36.9 gravity	1.40		
33 to 34.9 gravity	1.25		
30 to 32.9 gravity	1.10		
Below 30 gravity	.75		

SMACKOVER

1922	
September 27	.75
November 4	.50
December 11	.30

GULF COAST FIELDS

BATSON

1913	
January 1	1.00
July 1	1.08
December 10	1.00
1914	
April 1	.70
April 10	.60
April 20	.50
July 20	.45
August 20	.40
1915	
August 3	.50
1916	
January 1	.60
March 15	.80
July 25	.65
August 1	.80
August 8	1.00
1917	
1918	
February 15	1.35
August 1	*1.80
1919	
January 16	1.50
February 4	1.25
March 19	1.00
November 29	1.25
December 20	1.50
1920	
January 6	1.75
February 19	2.00
March 3	2.25
March 4	2.50
April 13	3.00
November 23	2.50
1921	
January 21	2.00
February 1	1.50
February 14	1.25
April 14	1.00
June 11	.80
October 8	1.00
November 9	1.25

*Oil Division, United States Fuel Administration.

DAYTON

1913	
January 1	.85
1914	
April 1	.60
April 20	.50
May 10	.40
1915	
August 3	.50
1916	
January 1	60
June 15	.80
August 1	.70
August 8	.90
August 16	1.00
1918	
February 15	1.35
August 1	*1.80
1919	
January 14	1.50
February 4	1.25
March 20	1.00
November 29	1.25
December 20	1.50
1920	
January 6	1.75
February 19	2.00
March 2	2.25
March 4	2.50
April 13	3.00
November 23	2.50
1921	
January 21	2.00
February 1	1.50
February 14	1.25
April 14	1.00
June 11	.80
October 8	1.00
November 9	1.25

GOOSE CREEK

1917	
January 15	$1.00
April 15	.90
October 1	1.00
1918	
February 15	1.35
August 1	*1.80
1919	
January 14	1.50
February 14	1.25
March 22	1.00
November 29	1.25
December 20	1.50
1920	
January 6	1.75
February 18	2.00
March 2	2.25
March 4	2.50
April 13	3.00
November 23	2.50
1921	
January 21	2.00
February 1	1.50
February 14	1.25
April 14	1.00
June 11	.80
October 8	1.00
November 9	1.25

*Oil Division, United States Fuel Administration.

HULL

1920	
February 18	2.00
March 2	2.25
March 4	2.50
April 13	3.00
November 23	2.50
1921	
January 21	2.00
February 1	1.50
February 14	1.25
April 14	1.00
June 11	.80
October 8	1.00
November 9	1.25

	A	B
December 23	1.25	.80

HUMBLE

1913	
January 1	1.00
1914	
March 10	.95
April 1	.70
April 10	.60
April 20	.50
July 20	.40
1915	
July 29	.50
December 20	.60
1916	
January 27	.80
March 14	.70
July 25	.65
August 1	.80
August 8	1.00
1917	
1918	
February 14	1.35
August 1	*1.80
1919	
January 14	1.50
February 14	1.25
March 22	1.00
November 29	1.25
December 20	1.50
1920	
January 6	1.75
February 19	2.00
March 3	2.25
March 4	2.50
April 13	3.00

It CAN be saved!

When you get your check from the Company for that good oil you knew you pumped into your tank, and they report it was "low gravity stuff"—not the quantity you thought you had either, you feel as though you'd been robbed, don't you?

There is no use in disputing the test, for it proves you have sustained a loss somewhere.

STOP IT

This fact stares every producer in the face; the better his oil the more liable it is to vaporize. No matter how high the gravity is at the start, IT MUST BE RETAINED— Or You Lose!

BUTLER VAPOR-PROOF TANKS ARE SAVING THOUSANDS OF DOLLARS IN EVERY FIELD. These tanks are not hit-and-miss affairs, but are perfected with the idea of paying for themselves many times over. THEY KEEP THE OIL THE WAY THEY RECEIVE IT

In most fields you will find a reliable firm, willing to help you solve your problems—these firms will erect Butler Vapor-Proof Tanks. They know their product will support their business—build it and keep it. (If we are not represented in your district, write us direct).

It is a business proposition to find out about Butler Tanks.
Any of the following reliable firms will gladly serve you.

May Tank Company
503 Oil Exchange Bldg. Casper, Wyo.
520 Higgins Bldg. Los Angeles, Calif.
Sunburst, Mont.

Peerless Steel Company
Ardmore, Okla.
Wilson, Okla.
Walters, Okla.
Duncan, Okla.
Cement, Okla.

M. & V. Tank Company
Wichita Falls, Texas

Standard Tank & Steel Works
Ranger, Texas
Graham, Texas
Cross Plains, Texas
Caddo, Texas
Eastland , Texas
Breckenridge, Texas

BUTLER MANUFACTURING COMPANY

Kansas City Minneapolis

November 23 ..... 2.50
1921
January 21 ..... 2.00
February 1 ..... 1.50
February 14 ..... 1.25
April 14 ..... 1.00
June 11 ..... .80
October 8 ..... 1.00
November 9 ..... 1.25

*Oil Division, United States Fuel Administration.

MARKHAM

1913
January 1 ..... .90
1914
March 10 ..... .85
April 1 ..... .70
April 10 ..... .60
April 20 ..... .50
July 20 ..... .45
1915
April 1 ..... .50
December 20 ..... .60
1916
January 25 ..... .70
July 25 ..... .65
1917
January 1 ..... .75
February 15 ..... 1.00
1918
February 15 ..... 1.35
August 1 .....*1.80
1919
January 14 ..... 1.50
February 14 ..... 1.25
March 22 ..... 1.00
November 29 ..... 1.25
December 20 ..... 1.50
1920
January 6 ..... 1.75
February 19 ..... 2.00
March 3 ..... 2.25
March 4 ..... 2.50
April 13 ..... 3.00
November 23 ..... 2.50
1921
January 21 ..... 2.00
February 1 ..... 1.50
February 14 ..... 1.25
April 14 ..... 1.00
June 11 ..... .80
October 8 ..... 1.00
November 9 ..... 1.25

SARATOGA

1913
January 1 ..... 1.00
1914
April 1 ..... .70
April 10 ..... .60
April 20 ..... .50
July 20 ..... .45
August 20 ..... .40
1915
August 3 ..... .50
1916
March 15 ..... .80
July 25 ..... .65
August 1 ..... .70
August 8 ..... .90
August 16 ..... 1.00
1917
1918
February 15 ..... 1.35
August 1 .....*1.80
1919
January 14 ..... 1.50
February 4 ..... 1.25
March 20 ..... 1.00
November 29 ..... 1.25
December 20 ..... 1.50
1920
January 6 ..... 1.75
February 19 ..... 2.00
March 3 ..... 2.25
March 4 ..... 2.50
April 13 ..... 3.00
November 23 ..... 2.50
1921
January 21 ..... 2.00
February 1 ..... 1.50
February 14 ..... 1.25
April 14 ..... 1.00
June 11 ..... .80
October 8 ..... 1.00
November 9 ..... 1.25

*Oil Division, United States Fuel Administration.

SOUR LAKE

1913
January 1 ..... 1.00
July 1 ..... 1.08
December 10 ..... 1.00
1914
March 10 ..... .95
April 1 ..... .70
April 10 ..... .60
April 11 ..... .50
July 20 ..... .40
1915
July 27 ..... .50
December 20 ..... .60
1916
January 27 ..... .80
March 14 ..... .70
July 25 ..... .65
August 1 ..... .80
August 8 ..... 1.00
1917
November 1 ..... 1.25
1918
February 15 ..... 1.35
August 1 .....*1.80
1919
January 14 ..... 1.50
February 14 ..... 1.25
March 22 ..... 1.00
November 29 ..... 1.25
December 20 ..... 1.50
1920
January 6 ..... 1.75
February 19 ..... 2.00
March 3 ..... 2.25
March 4 ..... 2.50
April 13 ..... 3.00
November 23 ..... 2.50
1921
January 21 ..... 2.00
February 1 ..... 1.50
February 14 ..... 1.25
April 14 ..... 1.00
June 11 ..... .80
October 8 ..... 1.00
November 9 ..... 1.25

*Oil Division, United States Fuel Administration.

SPINDLE TOP

1913
January 1 ..... 1.00
1914
April 1 ..... .75
April 10 ..... .65
April 20 ..... .55
July 20 ..... .50
August 20 ..... .45
1915
August 3 ..... .55
December 20 ..... .65
1916
March 13 ..... .85
July 25 ..... .70
August 1 ..... .85
August 8 ..... 1.05
1917
1918
February 15 ..... 1.40
August 1 .....*1.80
1919
January 16 ..... 1.55
February 4 ..... 1.25
March 19 ..... 1.00
November 29 ..... 1.25
December 20 ..... 1.50
1920
January 6 ..... 1.75
February 19 ..... 2.00
March 3 ..... 2.25
March 4 ..... 2.50
April 13 ..... 3.00
November 23 ..... 2.50
1921
January 21 ..... 2.00
February 1 ..... 1.50
February 14 ..... 1.25
April 14 ..... 1.00
June 11 ..... .80
October 8 ..... 1.00
November 9 ..... 1.25

*Oil Division, United States Fuel Administration.

WEST COLUMBIA

1919
April 30 ..... .75
November 29 ..... 1.00
December 20 ..... 1.25
December 22 ..... 1.50
1920
January 6 ..... 1.75
February 18 ..... 2.00
March 2 ..... 2.25
March 4 ..... 2.50
April 13 ..... 3.00
November 23 ..... 2.50
1921
January 21 ..... 2.00
February 1 ..... 1.50
February 14 ..... 1.25
April 14 ..... 1.00
June 11 ..... .80
October 8 ..... 1.00
November 9 ..... 1.25

PIERCE JUNCTION

	A	B
August 15		.65
October 8		.80
November 9		1.05
December 23	1.25	.80

ORANGE

1922
January 1 ..... 1.25
January 17 ..... 1.00
May 25 ..... 1.25

VINTON

1913
January 10 .....$0.90
1914
January 20 ..... 1.00
March 10 ..... .95
April 1 ..... .70
April 10 ..... .60
April 20 ..... .50
July 20 ..... .45
1915
August 3 ..... .60
December 20 ..... .70
1916
January 4 ..... .80
July 14 ..... .70
July 27 ..... .65
December 8 ..... .80
December 30 ..... 1.00
1917
1918
February 15 ..... 1.35
August 1 .....*1.80
1919
January 14 ..... 1.50
February 14 ..... 1.25
March 22 ..... 1.00
November 29 ..... 1.25
December 20 ..... 1.50
1920
January 6 ..... 1.75
February 19 ..... 2.00
March 2 ..... 2.25
March 4 ..... 2.50
April 13 ..... 3.00
November 23 ..... 2.50
1921
January 21 ..... 2.00
February 1 ..... 1.50
February 14 ..... 1.25
April 14 ..... 1.00
June 11 ..... .80
October 8 ..... 1.00
November 9 ..... 1.25

*Oil Division, United States Fuel Administration.

EDGERLY

Takes Vinton Prices.

JENNINGS

1913
January 10 ..... .90
July 1 ..... 1.10
1914
January 20 ..... 1.00
March 10 ..... .95
April 1 ..... .70
April 10 ..... .60
April 20 ..... .50
July 20 ..... .45
1916
January 1 ..... .55
January 4 ..... .65
December 8 ..... .80
December 30 ..... 1.00
1917
1918
February 15 ..... 1.35
August 1 .....*1.80
1919
January 14 ..... 1.50
February 14 ..... 1.25
March 22 ..... 1.00
November 29 ..... 1.25
December 20 ..... 1.50
1920
January 6 ..... 1.75
February 19 ..... 2.00
March 2 ..... 2.25
March 4 ..... 2.50
April 13 ..... 3.00
November 23 ..... 2.50
1921
January 21 ..... 2.00
February 1 ..... 1.50
February 14 ..... 1.25
April 14 ..... 1.00
June 11 ..... .80
October 8 ..... 1.00
November 9 ..... 1.25

*Oil Division, United States Fuel Administration.

The World

thinks of "Westinghouse" as one of the leading manufacturers of everything electrical.

Oil men, everywhere, link the name with big achievements in the manufacture of Electrical Oil Well Equipment.

Characteristically, the Westinghouse Oil Well Motor stands out as the type of drive offering maximum efficiency, dependability, safety, ease of control, ease of installation and low upkeep.

All parts of the control are assembled on an angle iron framework and completely wired at the factory.

"Electrical Equipment for Pumping Oil Wells," Leaflet 1134, will be sent by any of our district offices, upon request.

Westinghouse Electric & Manufacturing Co.
East Pittsburgh, Pennsylvania.

Sales Offices in All Principal American Cities

Say you saw it in The Oil Weekly

First Oil Was Found in Canada in 1857

This was two years before Drake gusher —Big flowing wells were found in 1862

The history of Canadian petroleum development is peculiar in that the first discoveries were by far the largest. After 65 years, the commercial oil production of the entire Dominion is still largely restricted to the comparatively small area of the southwestern Ontario peninsula.

The first oil was struck at what is now Oil Springs in Lambton County in 1857, two years before the Drake well. J. H. Williams of Hamilton was putting down a water well for use in connection with the refining of certain petroleum outcroppings known as "gum beds" when he struck liquid oil at 65 feet. Later drilling produced no large discoveries till February, 1862, when John Shaw drilled his flowing well, reputed to have produced several thousand barrels a day. A series of flowing wells resulted in an inrush of prospectors. In consequence of the immense production, oil dropped to 10 cents a barrel, and in the summer of 1862 some 7,000,000 barrels are believed to have been let flow away on the surface of Black Creek.

Flowing Wells Soon Quit

The flowing wells at Oil Springs soon petered out; but meanwhile commercial production had been secured nearby, at Petrolia; which is still, after 60 years, the most important Canadian oil producing area, and has been continuously productive ever since. The Oil Springs field where oil was found in the top of the corniferous limestone, did not last; but later, about 1881, deeper drilling resulted in a more lasting production. Numerous refineries sprung up in various parts of southwestern Ontario, the refining processes consisting largely of extracting the kerosene and running off the other constituents as waste. Meanwhile, the field was extended by drilling, oil being found chiefly in Enniskillen township, but also in Dawn, Sarnia, Plympton and Moore townships.

In 1866 oil was struck near Bothwell in Kent County, resulting in another short-lived boom, which ended when the "top show" production was exhausted. Later, in 1894, F. J. Carman drilled west of Bothwell, developing the present productive pool in the lower lime. Petrolia, Oil Springs and Bothwell —the latter in Kent County—have been Canada's three most important oil producing areas.

Fields of Short Life

Subsequent drilling in southwestern Ontario developed some limited and short-lived fields. In 1896 a small pool was opened in Dunwich township, near Dutton, in Elgin County, which is still productive. In 1902 the Gurd gusher in Raleigh township, Kent County, started a short lived boom, and in the fall of 1905 the Kerr No. 1 in Tilbury East township brought in the Tilbury field, which for a couple of years surpassed all the other pools in crude oil production, but thereafter declined very rapidly. Small oil pools were opened at various times near Comber, Leamington and Belle River, in Essex County, and near Thamesville in Kent County, and in 1910 a small pool was found in Onondaga township, Brant County.

In 1917 F. J. Carman drilled in Mosa township near Glencoe, and brought in the Mosa pool, which for two years was the most productive of Canadian fields, and is still producing on a far smaller scale. In the same year the Union Natural Gas Company drilling in Dover township, Kent County, encountered gas and commercial oil at 3185 feet in the Trenton limestone. The Dover field is, so far, the only place in Canada where commercial production has been secured in the Trenton formation; and it is still producing. The Dover discovery led to considerable testing of the Trenton limestone at other points in Ontario, most of it without results, though in Welland County a little gas production was secured.

Southwestern Ontario

In addition to its oil production, southwestern Ontario has developed several large commercial gas including Welland, Haldimand, Norfolk, Wentworth and Brant Counties; the Tilbury field in Kent, the Essex field (now exhausted) in Essex County, and the Vienna and Richmond fields in Elgin County. Some gas has also been found in Dawn township, Lambton County, in addition to the deep gas production in Dover township, Kent County.

In eastern Canada there has been a small oil and gas development in New Brunswick, where drilling carried on for a long series of years has secured a fairly good gas field at Stoney Creek, in Albert and Westmoreland Counties, with a little incidental oil production. This discovery is in proximity to the Albert oil shale deposits, various plans for developing which on a commercial scale have been discussed. In the Gaspe peninsula, province of Quebec, drilling carried on by English interests between 1897 and 1902 secured a small but evanescent production, apparently in the Trenton limestone.

Western Canada Development

So far, development work carried on in Western Canada has been largely unproductive, though numerous oil indications scattered over a very extensive area give promise of ultimate commercial development under conditions similar to those in the chain of states east of the Rocky Mountains. In the closing years of the 18th century, the famous explorer, Sir Alexander McKenzie, noted the burring outcrops of oil shale on the McKenzie river in the far north, and at the time of the Franklin expeditions, Dr. Richardson observed the tar sand deposits of the Athabaska, extending for upwards of 100 miles along that river.

The first drilling in the Canadian west was an unsuccessful test by W. H. Cushing at Calgary in the latter 80's. In 1897 the Canadian government drilled a commercial test for oil near Pelican Rapids on the Athabaska, encountering a gas flow which burned continuously for nearly 25 years thereafter. About 1903 there was an oil boom in the foothills of Southern Alberta, near Pincher Creek; one well developed a small commercial production, but the failure to secure oil in other tests resulted in the boom flattening out.

Later, drilling at Medicine Hat by the municipality, aided by the Canadian Pacific railway resulted in the development of an extensive gas field, and the Canadian Western Gas Field in 1912 developed gas production at Bow Island,

Minnehoma Oil Company

ATLAS LIFE BUILDING
Tulsa, Oklahoma

WM. E. HIGBY,
ASST. SECRETARY

October 21,1922.

Petroleum Safety Appliance Company,
213 Castle Building,
Tulsa, Oklahoma.

Attention:- Mr. W. E. O'Meilia.

Dear Sir:-

During the month of June this year we installed on our Lete Kolvin lease in the Cushing field three 250 barrel and two 100 barrel Deck clamp tanks. These tanks were of gas tight construction and in addition were equipped with your liquid seal vents.

After the installation of this equipment we made numerous tests for the purpose of determining as near as possible the advantages which might be gained by using this equipment in preference to the ordinary steel stock tanks.

From these tests we found that this equipment practically eliminated all loss of oil by evaporation. Several tanks of oil were allowed to stand 72 hours and at the expiration of that time these tanks did not show any loss in quantity. The elimination of evaporation also checked gravity losses, the oil run from these tanks being from .2 to .5 degrees higher then oil that had heretofor been run from the ordinary type.

We were so well satisfied with both the construction of the vent and the results obtained by its actual use that we have installed them on practically all of our leases in both Kansas and Oklahoma and we can conscientiously recommend them to any producer.

Very truly yours,

MINNEHOMA OIL COMPANY.

By Wm E Higby

WEH-jgb

ARE YOU LETTING EVAPORATION STEAL YOUR PROFITS

Loss in Gravity Means A Loss to You.

Let us save this loss by installing the Petroleum Safety Valve and Thief-Hole Device.

The Petroleum Safety Valve (not a Mechanical Valve but a Positive Liquid Seal which is not subject to Corrosion) will Eliminate Evaporation Losses, Insure a Tank from being Blown up by Pressure, or Collapsed by Vacuum.

The first step to insure increased profits on all your production is to investigate the savings being obtained by others. Satisfaction guaranteed. Fill out coupon and mail now for full particulars.

Use the Coupon

Petroleum Safety Appliance Company

213 Castle Bldg. **P. O. Box 811**

TULSA, OKLAHOMA

Petroleum Safety Appliance Co.
213 Castle Bldg., Tulsa, Okla.
Please send full particulars on your Petroleum Safety Vent and Thief-Hole Device.

Name . .....

Address . .....

City ..... State.....

which was piped to Calgary, Lethbridge and other places in Southern Alberta.

Light Gasoline Oil

In 1912 A. W. Dingman and associates commenced a test (Calgary Petroleum Products Company No. 1) in the Turner Valley, 35 miles southwest of Calgary. Simultaneously the McDougall-Segur Company started a test on the McDougall ranch nearby. The McDougall test finished dry, but in October, 1913, Dingman No. 1 struck a spurt of light gasoline oil, and a larger production was developed at about 2725 feet in May, 1914. The oil flowed by heads, averaging about two barrels a day, accompanied by considerable wet gas. The discovery started the Calgary boom, which resulted in the organization of about 780 companies, of which some 40 actually drilled, with an aggregate of approximately 50 tests. The war put a crimp in the boom, but later, in 1915, the Southern Alberta Oil Company brought in a flowing well with a maximum production of about 50 barrels a day. Later drilling developed several producing wells, mostly small ones, in the Turner Valley or Okotoks field, though outside that area the tests were unproductive.

In 1915 drilling was started in Peace River district, and since then a series of tests have been put down, largely by local interests, encountering heavy oil in small quantities in the Cretaceous limestone but usually ending in water troubles in the effort to get a larger production in the Devonian limestone. No shipments have yet been made from this area.

Spends $3,000,000

In 1918, Imperial Oil, Ltd., launched a comprehensive development campaign which, to date, has cost upwards of $3,000,000. Following elaborate geological investigations, a series of tests were launched in various parts of Alberta, Saskatchewan and the far north. To date upwards of 20 wells have been started, the failures including two tests in western Saskatchewan, at Muddy Lake and Rush Lake; two in eastern Alberta, at Czar and Fabyan; two in the southern foothills at Twin Butte; and one in the far north, at Windy Point on the north shore of Great Slave Lake. Production, estimated at 70 to 75 barrels a day, has been secured in the discovery well at Fort Norman, on the McKenzie, where four additional tests are drilling. Drilling operations are now in progress near Consul, Sask.; in Alberta at Monitor; near Red Coulee in the Sweetgrass district; west of Nanton; near Coalspur and on Pouce Coupe Creek in the northern foothills. Another test will be drilled in the Viking-Irma district, already unsuccessfully tested at Fabyan.

Tar Sand Deposits

In addition, a number of other companies are carrying on drilling operations at various points, while Imperial Oil, Ltd., has also taken over and is continuing the Dingman operations in the Okotoks field. Various interests are endeavoring to work out distillation extraction or reduction processes for the utilization of the tar sand deposits on the Athabaska. A large gas field has been developed in Viking district, central Alberta. So far, however, the only established oil production yet secured in the Canadian West is in the Okotoks field southwest of Calgary, and below Fort Norman on the Mackenzie.

In Manitoba and Saskatchewan drilling operations have been limited to a few successful tests. In British Columbia drilling has been more active, fair oil showings having been secured in the Flat-

Simple!
Certain!
Satisfying!

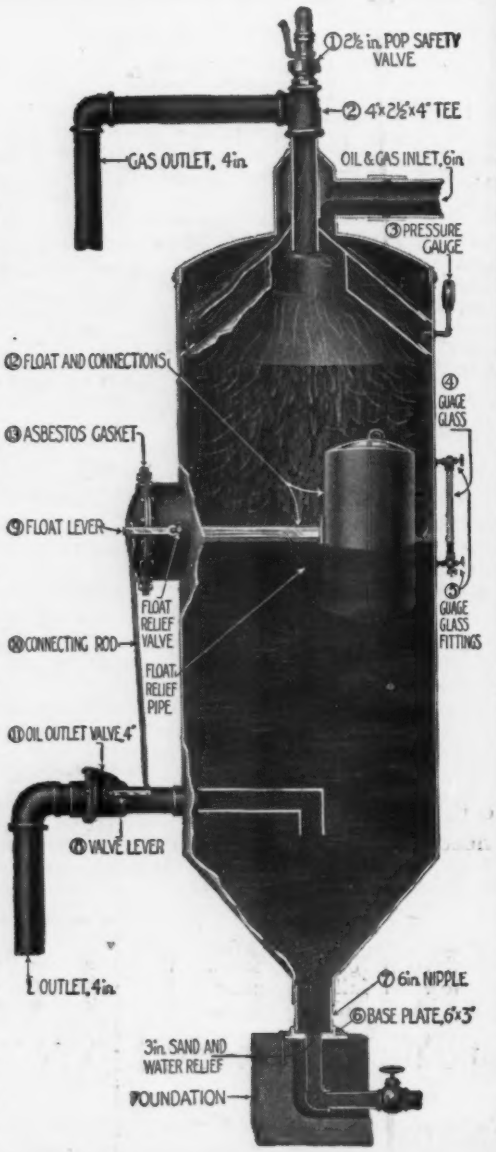
Trumble Oil and Gas Separators

Need no frenzied boosting

Hundreds in Operation in Texas Fields

Thousands of Dollars Saved Producers

Gravity Delivery at Atmospheric Pressure — Automatic — Fool Proof



TRUMBLE GAS TRAP COMPANY

WILLIAM C. RAE,
Sales Manager
916 Higgins Bldg.,
Los Angeles, Cal.

Eastern Representative:
C. F. Camp, P. O. Box 289, Tulsa, Okla.

Get Him on the Wire

Ramblings of the

OF COURSE, at one time or another, you have written an ad. Maybe the cook quit; maybe the kid wanted a houn' dog; maybe you sought to buy or sell property.

But at any rate you remember what a tremendous job it was to write that ad. And when the thing was finally finished, you felt like an author must feel when he completes what promises to be a best seller.

Advertisers all take themselves seriously. We do. The first of the year we talked long and earnestly about advertising. Among other things, we wondered if a sugar coated way couldn't be devised to make the oil fraternity understand how earnest we have been, and are, about good service.

Of course our customers know, but there's a lot of you Oil Men who have never discovered that it's worth while to go out of your way, if necessary, to do business with a Frick-Reid store.

Service is hard to sell. You can't illustrate it, and you can't talk about it effectively because the word has been overworked. We looked in the dictionary for a synonym, but there doesn't seem to be any. We found one definition we like: Service; advantage conferred.

If there isn't a tremendous advantage to the Oil Man in doing business with Frick-Reid, our mission has been a failure and our service is after all commonplace.

But we look about at our customers and see every evidence that Frick-Reid service and Frick-Reid merchandise do somehow confer an advantage.

A contemporary talks about "Reroofing the world for the last time." If you are a stranger to the Frick-Reid store near your operations, we openly and frankly invite you to switch your patronage for the last time.

FRICK F-R REID
SUPPLY TULSA, OKLA. PITTSBURGH, PA. COMPANY

Stores in All Principal Fields

head Valley and on Graham Island; and by the Provinical government on the upper Peace—so far without commercial results.

Production in 1921

Total production for the Ontario pools in 1921, official figures, was as follows:

	Bbls	Gals
Petrolia	68,483	32
Oil Springs	40,966	22
Moore Tp	7,536	4
Sarnia Tp	4,068	20
Plympton Tp	480	21
Bothwell	26,877	1
Tilbury East	1,002	20
Dover West	7,473	10
Raleigh Tp	3,320	21
Onondaga	566	6
Mosa Tp	10,764	3
Thamesville	1,319	20
Total	172,858	32

Trend of Production

Official figures of crude petroleum production in Ontario for years prior to 1898 are lacking. The production—except for 1862, the year of the flowing wells at Oil Springs—probably never aggregated over 1,000,000 barrels a year; in the earlier years the Petrolia field accounted for most of the production; and as new fields came in the older fields declined. Since 1898 the production, in barrels, has totaled as follows:

Year	Bbls
1898	750,901
1899	704,794
1900	692,650
1901	572,426
1902	519,845
1903	481,504
1904	492,502
1905	610,844
1906	585,328
1907	762,503
1908	513,633
1909	414,185
1910	307,533
1911	297,935
1912	217,299
1913	228,080
1914	212,495
1915	214,442
1916	196,877
1917	203,000
1918	288,760
1919	220,100
1920	181,750
1921	172,859
1922 (Estimate)	153,885

CANADIAN OIL PRODUCTION

Pool	January-June (Official) Bbls	Gals	July-December (Partly Estimate) Bbls	Gals	Total (Partly Estimate) Bbls	Gals
Petrolia	31,552	18	30,251	21	61,804	4
Oil Springs	18,537	8	23,016	22	41,553	30
Dawn Township	216	34	.....	..	216	34
Moore Township	3,165	21	3,347	21	6,513	8
Total	76,002	33	77,882	7	153,885	5
Plympton Township	234	8	168	3	402	11
Bothwell	11,217	33	11,015	15	22,233	13
Tilbury East	126	32	.....	..	126	32
Dover West	3,578	3	1,415	5	4,993	8
Raleigh Township	398	11	162	..	560	11
Dutton	246	1	.....	..	246	1
Onondaga	27	27	135	19	163	11
Mosa Township	5,441	6	6,604	2	12,045	8
Thamesville	.....	..	127	27	127	27
Total	76,002	33	77,882	7	153,885	5

Standard Pipe Line Co. Organized in Louisiana

Baton Rouge, La., Jan. 15.—Because of the extension of the company's lines into Arkansas, the Standard Oil Company (Louisiana) has organized the Standard Pipe Line Company, which has been incorporated as a common carrier line. The capital stock of the Standard Pipe Line Company is $25,000,000.

D. R. Weller of Baton Rouge, president of the Standard Oil Company (Louisiana), has issued the following statement in connection with the incorporation of the new company:

"We have had this matter under consideration for some time and finally decided to segregate its pipe line system from the company's other property because of the fact that we recently purchased the Prairie Pipe Line Company's lines in the state of Arkansas.

"The pipe line purchased by the Standard Company of Louisiana from the Prairie Pipe Line Company in Arkansas was organized as a common carrier interstate and was under the jurisdiction of the interstate commerce commission. It therefore, became necessary for the line to continue to be operated in interstate commerce. Furthermore, the Standard Oil Company had recently extended its own lines into Arkansas and it was deemed desirable to separate its transportation facilities from the company's other properties. The Standard Pipe Line Company, Inc., was therefore, organized as a common carrier, and will transport crude oil interstate and intrastate."

Oil Companies Recently Chartered in Oklahoma

Oklahoma City, Okla., Jan. 6.—New charters recently granted by secretary of state's office include:

Lincoln Oil and Gas Company of Oklahoma City. Incorporators are Paul M. Pope, Josephine B. Lincoln, C. H. Russell, all of Oklahoma. Capital stock is $50,000.

Barnsdall Petroleum Storage Company of Tulsa. Incorporators are F. E. Holsten, H. M. Edinger, J. C. Evans, all of Tulsa. Capital stock is $10,000.

Turley Gasoline Company of Oklahoma City. Incorporators are G. W. Turley and Pay Henry, both of Oklahoma City, and Hugo Hoevel of Dallas, Texas. Capital stock is $25,000.

PITTSBURGH STANDARD
RIGID CONDUIT
ENAMELED AND GALVANIZED

A Real Production Aid

PITTSBURGH Standard provides greatest protection against electrical hazards. Where profits depend to a great extent on future production, you need the safety assurance of P. S. for derricks, tank farms and refineries. It prevents short circuits.

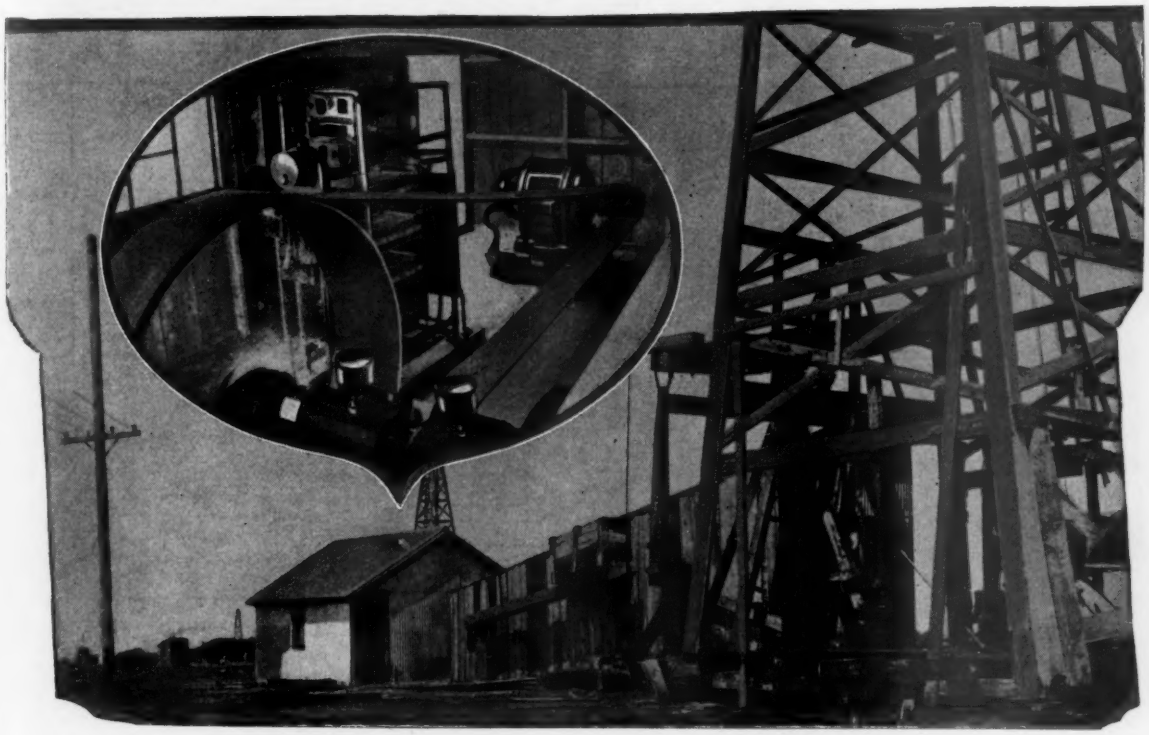
P. S. costs no more than ordinary conduit. Assures tight fitting joints and a perfect conduit system. Wherever wiring is installed P. S. should be used.

Enameled Metals Co., Pittsburgh, Pa.

Southwest General Electric Co. Carries Full Stock at:

Dallas, Houston, San Antonio, El Paso and Oklahoma City

Oil men have begun to eliminate the time lost and the resulting decrease in production caused by avoidable shutdowns in pumping operations



Why shut down your lease?

WHY quit producing for 55 days every year when it can be avoided? Practically every oil operator not yet pumping his beam-wells by electric drive is suffering this loss.

G-E motor drive decreases shut-downs and delays due to engine troubles, and its installation results in an average increase in production of at least 15%. The largest Kansas producer, now operating considerably more than 500 G-E two-speed oil well pumping motors, made this statement:

"Electric motors have more than paid for themselves within six months or a year on account of decreased shut-downs."

G-E two-speed oil well pumping motors have proved their worth in various operations in producing oil, and also in emergency drilling with small tools and in pulling casing. For drilling rigs, however, it is standard practice to use separate electrical equipment, installing a pumping motor as each well is completed.

The G-E oil well specialist in your district will be glad to give you additional testimony and to explain further the advantages of electric motor drive.

Technical papers 503 and 504 mailed on request.

Communicate with the office near you

SOUTHWEST

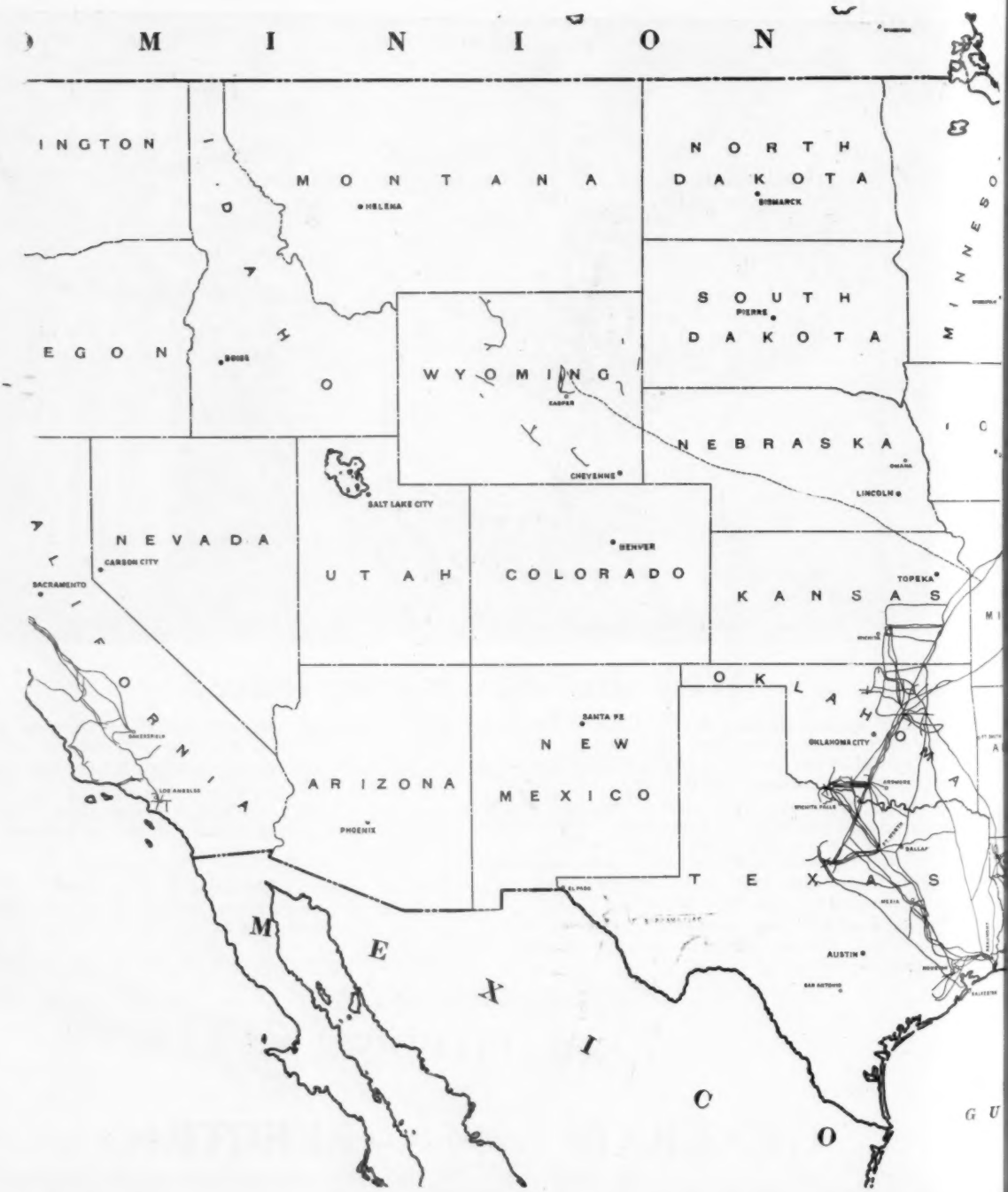
GENERAL ELECTRIC COMPANY

Dallas
El Paso
San Antonio

Tulsa
Houston
Oklahoma City

Say you saw it in The Oil Weekly

Trunk Pipe Line Map



of the United States

Trunk Pipe Line Map

OF THE

UNITED STATES

AS OF

January 1st, 1923

Average Scale: Statute Miles

Mountain States to Have Pipe Line Outlet

During 1923 will connect with Mid-Continent trunk lines—All lines listed

Despite the fact that there is no complete connected system of pipe lines in the Rocky Mountain district, plans were made in 1922 which undoubtedly will be carried into effect in 1923 that will, for the first time, connect up the Wyoming oil fields with Kansas City, the Mid-Continent, Gulf Coast and Eastern States lines. The Sinclair Crude Oil Purchasing Company or the Mammoth Oil Company will lay this line from Teapot Dome and Salt Creek to Kansas City or a point near there. It is estimated that this line will be under way within the next two or three months and that it will be completed by the close of the year. Final surveys are now under way for this line at present.

Two more lines were laid from Casper to Salt Creek during the last year, making this central oil city of the west, more and more a great refining center.

There are three centers for pipe lines in Wyoming, with isolated lines in this state, Montana and Colorado.

The centers are Casper, Laramie and Greybull. At Casper there are lines from Bolton Creek, Big Muddy, Salt Creek, Teapot, Ferris, Lost Soldier and Poison Spider bringing in both oil and gas to this refinery center. In Greybull, there are lines connecting the refinery with Elk Basin, Grass Creek and Hamilton Dome.

At Laramie pipe lines connect the refinery with Rock Creek, Ferris and Lost Soldier Fields.

Below are the pipe line connections out of the most important fields:

Big Muddy

Illinois Pipe Line Company—Twenty-one miles of 8-inch pipe line has been laid by this company from the east end of the Big Muddy district into Casper. It has laid two and a half miles of 3-inch pipe line from the pump station in the Big Muddy field to the plant of the Mutual Refining Company in Glenrock.

Salt Creek

Midwest Refining Company—This company has 6-inch pipe lines from the Salt Creek field to Station No. 1 at Teapot, and two 8-inch and two 6-inch lines from the Teapot station to the tank farm near the refinery site at Casper, the total distance being about 42 miles. This company also has taken over the Natrona Pipe Line Company's line which was the first line in Wyoming. It was laid in 1902 from the Shannon shallow pool, north of Salt Creek proper, to the camp of the Holland (Dutch). It is a 4-inch pipe line. From the Holland camp to Casper it is a 6-inch line. In 1914, a year after the 6-inch line was laid, the Midwest took the line over. The approximate capacity of the Midwest lines is 50,000 barrels of crude per day.

Western Pipe Line Company—This company completed its 8-inch line from its own tank farm near the Midwest refinery to Salt Creek in the latter part of the year. It pipes considerable oil for the Midwest and Standard interests but agrees to take oil of independents in addition. The capacity is about 15,000 barrels of crude daily, and the company has been running practically to capacity for about two months. Twenty-six miles are 8-inch and most of the remainder is double 6-inch pipe.

Central Pipe Line Company—This third pipe line was laid from Salt Creek to the tank farm near The Texas Company's new refinery, two miles east of Casper, the latter part of the year. It was opened during November and has been taking about 12,000 barrels per day on an average since placed in operation. It consists of 8-inch pipe all the route. The E. T. Williams and Texas Company interests fostered this company in order to get crude from properties of the Williams and Texas Companies in Salt Creek and in order to furnish crude requirements for The Texas Company's plant.

Brenning Basin

Wyatt Oil and Refining Company—From Brenning Basin to a small refinery at Fort Fetterman,

Cable Type

"The real establishment of standards is by no means always a matter of Simplification—but is rather improvement"

—From Mr. A. B. Steen on "Standardization"—At St. Louis.

DEVIL'S PITCHFORKS are not as simple as horn sockets or 3-prong grabs to fish underreamer lugs, slips, and rotary bits, but they are fifty times as effective as those old methods.

Size	Price Cable Type	Price Rotary Type
4"		$225.00
5-3/16"	$265.00	265.00
6"	285.00	285.00
8"	310.00	310.00
10"	350.00	350.00
12½"	430.00	430.00
15½"	490.00	490.00

Immediate shipment.

Brown Welding & Machine Co.

BRECKENRIDGE, TEXAS

"Better Oils"

When higher quality petroleum products can be made—"HUMBLE" will refine them—
The complete, modern facilities of the Humble Oil & Refining Co., assure this—

Inquiries Solicited

HUMBLE OIL & REFINING CO.

HOUSTON, TEXAS

"Highest Quality"

—Producing
—Pipe Lines
—Refining
—Transporting
—Deep Sea Loading

this company has about four miles of 4-inch pipe line. It was laid in 1918 and 1919, but it has never been used. It is said by pipe line men to be not completed and that part which is finished is impracticable.

Byron Field

Allen Oil Company—This oil company owns eight miles of 3-inch pipe line extending from the Byron oil field to Lovell.

Dallas Field

Anglo-American Oil Company, Ltd.—A 6-inch pipe line was laid by this company in 1917. It connects the Dallas fields with loading racks at a small station near Lander, named Wypo, on the Northwestern railroad line. A 4-mile extension was laid from Dallas to Derby dome in 1922. It's a 4-inch oil line.

Elk Basin

Illinois Pipe Line Company—There are 12 miles of 6-inch pipe line running from Elk Basin field to Frannie. Five miles west of Frannie, at Frannie Junction, this company has 55 miles of 6-inch line to Greybull. At Cowley Junction there is a 6-inch lateral, which branches off to the Cowley refinery. This lateral is 10 miles in length.

Grass Creek

Illinois Pipe Line Company—The Grass Creek field is connected with Chatham by an 8-inch pipe line, a distance of 30 miles. From Chatham to the Greybull refinery there is a 6-inch line covering a distance of 50 miles. This is known as the longest gravity line in the world.

Ohio Oil Company—From its casinghead gasoline plant at Grass Creek, to a 3000 barrel tank on the Burlington railroad line at Chatham, this company has 30 miles of 3-inch welded line.

Hamilton Dome

Illinois Pipe Line Company—Hamilton Dome is connected with the Illinois Pipe Line Company's Grass Creek line by 14 miles of 6-inch pipe.

Mule Creek

Illinois Pipe Line Company—From the field to the pumping station, the company has five miles of 8-inch gravity line, and then 14 miles of 3-inch line to loading racks on the Burlington railroad at the Dakoming station. This line was laid in 1920.

Osage

Illinois Pipe Line Company—From the Osage field in Weston County there is a 5-mile line to Clay Spur on the Burlington. It is a 3-inch line.

Bolton Creek

Hope Engineering and Supply Company—This company hopes to have the line from the Bolton Creek field, 29½ miles southwest of Casper, completed early in January. It is a 6-inch line connecting this field with the Casper refineries.

Mahoney Dome

Ohio Oil Company—This company has a 4 and 6-inch gas line from this dome to Rawlins. It is about 36 miles in length. Most of it is 6-inch pipe.

Ferris-Lost Soldier-Mahoney Dome

Producers and Refiners-Midwest—These two compaies laid a gas line from these districts, thereby giving the refineries in Casper an additional supply. It is about 90 miles in length. It is 10 and 12-inch largely.

Ferris-Mahoney

Producers and Refiners Corporation—The Producers and Refiners Corporation has an 8-inch line from this district to Grenville to connect with its new refinery now nearing completion. It is approximately 42 miles long.

Elk Basin

Elk Basin-Gallatin Gas Company (Ohio Subs.)—This company has laid a 70-mile gas line from the Elk Basin field to Billings. It is 8-inch, supplying Billings.

Hidden Dome

Wyoming Gas Company—This company made a loop in the northern part of the state in supplying gas. It laid a double 6-inch line from Greybull to Nowood, and an 8-inch line from Nowood to Hidden Dome. This supplies gas to Basin, Manderson, Greybull and smaller communities en route. It is about 45 miles in length.

Pilot Butte

Illinois Pipe Line Company—This company has 30 miles of 3-inch pipe line which connects the Pilot Butte field with loading racks at Riverton, laid in 1918.

Rock Creek

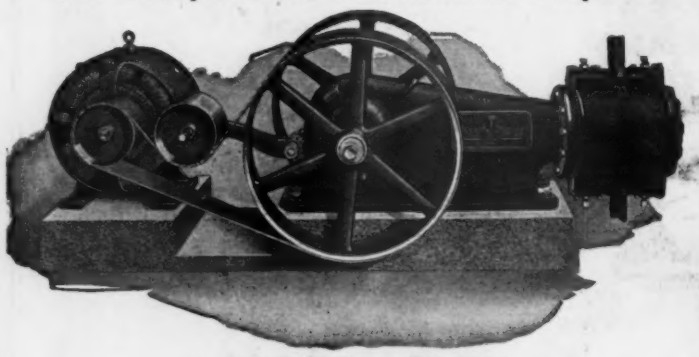
Illinois Pipe Line Company—A system that connects Lost Soldier and Ferris oil districts with the Midwest refineries at Laramie. From the Lost Soldier field to Midway Station in Separation Flats, there is a 4-inch pipe line, 21 miles in length. This 4-inch line was replaced by 6-inch in 1922. There is a 6-inch line 14 miles long from the Ferris field to the Midway station. There are 21½ miles of 4-inch and 6-inch parallel lines from the Midway station to Fort Steele. There is 10 miles of 6-inch line from the Rock Creek field to loading racks at Rock Creek field to loading racks at Rock River. From the Rock Creek field to Laramie, the company has a 6-inch line which is 38 miles in length.

Torchlight

Midwest Refining Company—

(Continued on page 98.)

PENNSYLVANIA
Air Compressors and Vacuum Pumps



A MODERN DESIGN
Sales and Service
SOUTHERN ENGINE & PUMP COMPANY
Houston, Texas

Twenty Years of Service Without Any Repairs

An Ajax Owner in Mexico Says—

"August, 1922.

Gentlemen:—

We are pleased to inform you that in 20 years during which we have been operating with a 25 H. P. Ajax engine, this is the first repair which has been necessary and that this places us again in a magnificent position to operate.

Thanking you for this attention we subscribe ourselves gratefully yours,

Jose Solorzano & Bro."

AJAX ENGINES

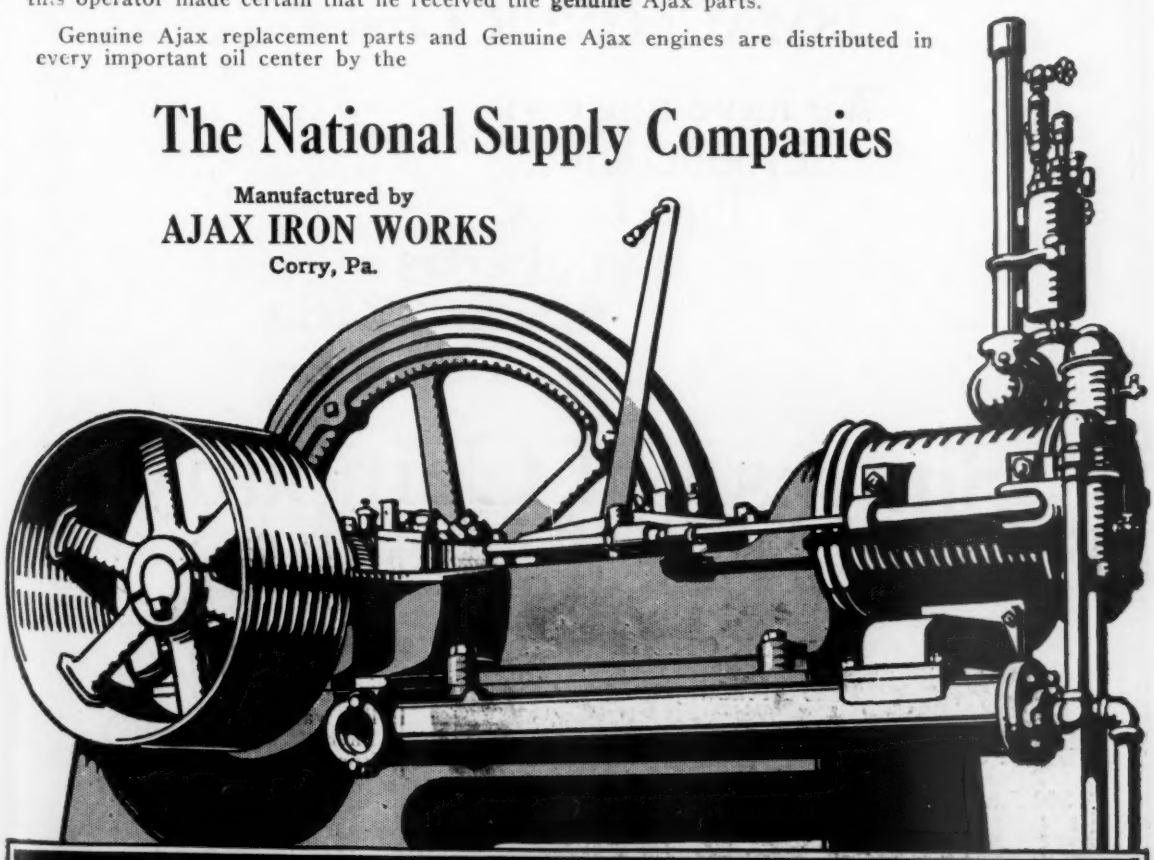
No. 3439

Think of it. 20 years of service before a repair part was necessary. No wonder this operator made certain that he received the **genuine** Ajax parts.

Genuine Ajax replacement parts and Genuine Ajax engines are distributed in every important oil center by the

The National Supply Companies

Manufactured by
AJAX IRON WORKS
Corry, Pa.



AJAX DRILLING ENGINES

Say you saw it in The Oil Weekly

Crude Petroleum

Producers and Marketers of
Homer, Mexia, North Central Texas and
SMACKOVER Crudes

We have our own
Production
Pipe Lines
Tank Farms
Loading Racks
Tank Cars

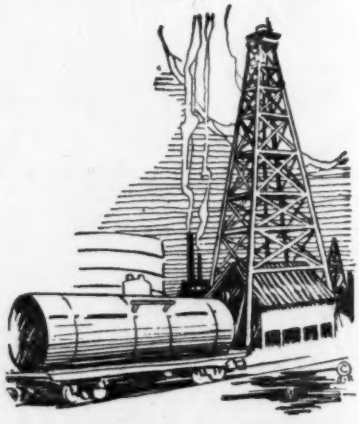
Simms Oil Company

Principal Office: 1504-06 Commerce St., Dallas, Texas, Telephone X 4307

NEW YORK OFFICE
120 Broadway

TULSA OFFICE
306 Atco Bldg.

SHREVEPORT OFFICE
410 Levy Bldg.



Say you saw it in The Oil Weekly

Mid-Continent Crudes Advanced 20 Cents Barrel During Past Week

Wichita Falls, Texas, Jan. 16.— The establishment of a posted price of $2.10 per barrel for crude testing 41 degrees gravity and above last Saturday by the principal purchasing agencies, along with a blanket raise of 10 cents per barrel on all lower grades of oil is expected to be followed up by the oil operators in the North Texas district with more intensive drilling campaigns, especially in the fields that produce oil commanding the new high price. Increased prices had been anticipated several weeks in advance, and spot oil was commanding premiums around 40 cents per barrel, with a very little amount available owing to independent refiners in the North Texas district experiencing an unusual mid-winter demand for their refined products and upholding their daily runs.

Premiums will have to be materially reduced by the refiners with the new crude price schedule in effect until sufficient time can elapse for the prices on refined products to absorb the added cost of the raw commodity. Although the demand for refined products has developed strength since crude took an upward trend, the refiners have not been able to build up their prices, and it is believed that daily runs will be curtailed for a brief period. This action on the part of the plant owners will have a tendency to bring premiums down from their present high level, as it is the competition among the refiners for spot oil that forces premiums to a large figure, and at the same time will aid the refined market by reducing the output.

Since a great number of the independent refiners in North Texas have their crude delivered to the plant through common carrier lines and are forced to accept oil from the common stocks of the carrier, although the price is governed by the gravity of the oil contracted for at the well, they sustain considerable loss by reason of the carrier not being able to deliver at all times as good a grade of oil as originally accepted for transportation to the plant owner. To combat this loss, the refiners are literally combing the fields for second and third grades of crude, and the difference in price makes it profitable for them to pay a greater premium to the producer of such oil. This procedure is reacting to the advantage of the producer of the cheaper grades of oil.

Only a small percentage of the daily crude output in the North Texas district will command the new price of $2.10 per barrel, and it is mostly confined to new completions in the South Electra and Northern Archer County fields. However, a few pools in the Burkburnett districts continue to furnish oil testing 41 gravity or better.

The gasoline market in the North Texas district grew active as soon as the increased crude prices became generally known, and refiners holding surplus stocks had no difficulty in getting shipping instructions at prevailing prices, which have since tightened up about one-quarter of a cent per gallon on new navy, with practically no change in the higher grades. The buying is confined largely to domestic jobbers, who are willing to pay from 11¼ to 11¾ cents per gallon for navy. Naphthas have also reflected the shakeup in the market, and are reported somewhat scarce at 10½ cents, with natural gasolines taking the same course. Kerosene gives no indication of making a comeback in price, after having slumped 4¼ cents, and stocks are reported accumulating at plants.

Although the Wichita Falls fuel oil market is firm at 90 and 95 cents, with stocks greatly reduced as result of orders placed by railroads during the past month, the market on this product at Fort Worth and Dallas has been materially affected by foreign sellers entering their trade territory, and refiners are quoting freely at $1.10 per barrel.

Tulsa, Oklahoma, Jan. 16.—Runs of the Sinclair Pipe Line Company in December were 1,934,805 barrels, with deliveries of 1,066,268 barrels. Stocks held at the end of the month were 29,661,221 barrels. The Empire Pipe Line Company had runs of 809,054 barrels in December, while deliveries were 806,868 barrels. Stocks held December 31 were 1,984,400 barrels.

AVERAGE DAILY PRODUCTION FOR ALL UNITED STATES FIELDS
(Stated in Barrels)

This table is carried each week by The OIL WEEKLY, and shows daily production average for each state or section. Figures for Texas, Oklahoma, Kansas, Louisiana and Arkansas are compiled by The OIL WEEKLY, while estimates for the Mountain States, Eastern States and California are furnished by the American Petroleum Institute.

Week Ending—	West Texas	North Texas	Texas Coastal	Total Texas	Kansas	Oklahoma	Louisiana	Eastern States	Wyoming-Montana	California	Arkansas	U. S. Total
Jan. 7, 1922....	199,220	66,410	108,145	373,775	88,050	311,850	94,475	115,500	59,625	320,000	45,530	1,406,805
Feb. 4	206,225	64,695	108,600	383,230	83,800	323,465	103,195	115,500	58,000	325,000	37,560	1,426,040
March 4	218,275	59,855	104,670	382,800	82,450	342,400	126,805	110,000	57,800	310,000	32,515	1,444,770
April 1	197,170	59,620	101,185	357,975	81,900	366,900	128,530	114,500	71,150	325,000	34,650	1,480,605
May 6	168,720	62,270	113,350	344,340	85,200	391,500	87,725	119,000	74,850	330,000	37,700	1,470,315
June 3	155,900	62,445	113,855	332,200	86,100	399,400	98,360	111,500	79,000	350,000	37,395	1,493,955
July 1	147,305	63,020	107,100	317,425	92,000	415,600	94,795	115,000	83,850	355,000	32,800	1,506,470
Aug. 5	150,230	69,055	105,805	325,090	91,675	420,250	94,350	120,500	85,200	375,000	32,105	1,544,170
Sept. 2	139,120	70,640	108,290	318,050	88,300	421,900	103,415	117,000	81,000	380,000	31,530	1,541,195
Oct. 7 136,795	68,625	113,385	318,805	89,190	424,500	99,615	116,000	83,600	410,000	34,960	1,576,670
Oct. 14	133,695	65,325	116,690	315,710	90,425	428,200	96,495	116,500	88,300	420,000	29,755	1,585,385
Oct. 21	132,520	66,640	114,895	314,055	90,950	422,750	97,655	117,000	87,500	435,000	33,315	1,598,225
Oct. 28	134,550	66,815	115,550	316,915	91,050	420,700	96,245	116,000	86,250	430,000	38,580	1,595,740
Nov. 4	132,790	68,420	110,210	311,420	91,800	414,200	95,430	116,000	109,945	450,000	63,665	1,652,460
Nov. 11	132,850	66,465	114,895	314,210	91,100	418,800	95,300	116,500	102,520	445,000	62,130	1,645,560
Nov. 18	133,720	65,270	115,510	314,500	91,240	424,200	91,735	117,000	111,055	450,000	92,545	1,692,275
Nov. 25	131,265	66,115	115,985	313,365	90,250	427,600	91,175	116,000	100,850	455,000	90,560	1,684,800
Dec. 2	131,315	66,665	110,495	308,475	90,900	431,550	90,570	115,500	89,500	460,000	126,675	1,713,170
Dec. 9	131,085	64,060	106,180	301,325	86,790	439,825	88,045	115,000	109,595	470,000	106,065	1,716,645
Dec. 16	123,035	65,525	117,535	306,095	87,100	434,860	84,315	115,000	114,275	480,000	100,935	1,722,580
Dec. 23	117,740	67,475	110,170	295,385	86,500	432,550	84,025	115,000	110,750	500,000	96,605	1,720,815
Dec. 30	119,125	64,930	114,715	298,770	86,250	436,250	85,610	114,000	119,275	510,000	108,380	1,758,535
Jan. 6, 1923.....	120,300	69,185	123,940	313,425	86,075	432,265	82,835	113,500	116,400	515,000	118,445	1,777,945
Jan. 13	117,610	64,170	124,585	306,365	86,360	438,805	80,040	113,500	87,490	525,000	111,260	1,748,820

NOTE—Mexia production included in West Texas.

Mid-Continent Advance Will Start Intensive Drilling in North Texas

Tulsa, Okla., Jan. 17.—Another 10 cent advance in crude oil prices by the Prairie Pipe Line Company this morning brought Mid-Continent oils up to a figure 20 cents higher than prevailed a week ago. The first advance of 10 cents was posted January 13 by the Prairie.

Other buyers met the advance this morning. Prices as announced by the Prairie this morning range from $1.10 for oil testing below 28 degrees to $2.20 for oil testing above 41 degrees.

Prices announced by the Prairie are not effective in the Healdton field, where the price was advanced on only one grade Tuesday by the Magnolia Petroleum Company. Quotations for Healdton, Beaver Creek, Cement and Walters are: below 28 degrees, 65 cents; 28 to 30.9 degrees, 95 cents; 31 to 32.9, $1.20. The Texas Pipe Line Company is still paying a flat price of 75 cents for Healdton crude.

In posting the first advance on Mid-Continent crudes January 13 the Prairie Pipe Line Company added another grade to the schedule. This was for oil testing from 39 degrees to and including 40.9 degrees, which was then quoted at $1.90. The Prairie also posted a price of $2.10 for oil testing above 41 degrees. Both these prices were advanced 10 cents along with others today.

The continued rush for light gravity crude oil is thought to be responsible for the advances in Mid-Continent, as well as in other fields west of the Rocky mountains. As evidence of this, the Sinclair and Cosden companies have in the past 10 days begun construction of lines into the Tonkawa fields, now producing 36,000 barrels daily. This oil tests higher than 41 degrees and will bring the top price of $2.20. At present the Gypsy Oil Company is considering entering the Tonkawa field as buyer, which will bring the Gulf Pipe Line Company into the field, giving this field 10 pipe lines.

Shreveport, La., Jan. 16.—The Smitherman Syndicate, which owned an undivided half of the working interest in practically all of the leases being operated by the Gilliland Oil Company in the Haynesville field, has sold its half interest to the Atlantic Oil Refining Company for a consideration of $1,000,000 cash and other considerations, but reserving half of the interest sold, or one-fourth of the whole, for a period of two years.

Kay County Wildcat Shows for Good Well

Tulsa, Okla., Jan. 15. — After drilling through 70 feet of sand, the wildcat well of the Sapulpa Refining Company and associates, No. 1 Thompson, northeast corner of the southeast of the southwest quarter of section 15-27-5 on the Kaw Indian reservation in Kay County, put 800 barrels of oil in the tanks in 48 hours.

This is the well reported last week with 400 feet of fluid in the hole from what was believed to be the Burbank sand, which had been drilled then only three feet. Further drilling has served to establish the producing horizon as identical with production in the Burbank pool one and a half miles to the southeast and lends more proof to the contention that the well is but an extension of the prolific pool of Osage County.

Class "A" Gulf Coast Crude May Be Advanced

Houston, Texas, Jan. 18.—With the price of crude advancing in all sections except possibly Arkansas and Louisiana and California, and with an advance probable in the light oil districts of Louisiana, Gulf Coast operators have been asking "When will Gulf Coast crude advance?"

The principal obstacle to an advance in the Gulf Coast at this time is the amount of Class B oil, which is lighter than Class A, and which does not have the lube stock in it that Class A has. Some of the purchasing companies are finding this Class B oil a white elephant on their hands.

It is possible that within a short period Class A Gulf Coast oil will be advanced, but that Class B will not be advanced. An advance in Louisiana would not be surprising.

IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

	Atlantic Ports						Gulf Coast Ports					
Week Ending	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans, Baton Rouge	Port Arthur, Sabine Pass	Tampa	Total	Total at all ports
July 29 ...	54,000	230,000	806,000	91,139	252,000	1,433,139	241,000	364,000	587,000	22,000	1,214,222	2,647,361
August 5	110,000	204,000	476,000	185,000	282,000	1,257,000	98,000	104,000	732,000	.....	934.000	2,191,000
August 12	170,000	182,745	495,000	161,400	276,000	1,285,145	304,000	392,667	277,000	.....	973,667	2,258,812
August 19	140,000	126,000	889,000	140,466	279,000	1,574,466	271,000	118,523	324,000	.....	713,523	2,287,989
August 26	297,000	216,000	404,000	175,000	454,000	1,546,000	314,000	246,000	261,000	157,000	978,000	2,524,000
Sept. 2 ..	225,000	297,000	357,000	88,420	349,201	1,085,621	112,000	131,000	200,000	65,000	508,000	1,593,621
Sept. 9 ..	194,000	136,814	559,254	88,700	60,000	1,038,768	186,000	225,000	195,000	45,000	651,000	1,689,768
Sept. 16 .	185,000	150,000	530,727	259,844	193,000	1,318,571	199,000	123,480	200,000	20,000	542,480	1,861,051
Sept. 23 .	50,000	.....	272,000	94,000	140,000	556,000	292,000	178,000	157,000	20,000	647,000	1,203,000
Sept. 30 .	120,000	156,000	832,720	127,000	103,000	1,338,720	310,000	202,051	96,000	.....	608,051	1,946,771
Oct. 7 ..	140,000	188,239	334,000	253,844	296,000	1,212,083	172,000	140,514	192,000	69,000	573,514	1,785,597
Oct. 14 .	220,000	104,000	331,000	.....	280,938	936,604	348,000	343,210	363,000	.....	1,054,210	1,990,814
Oct. 21 .	61,769	43,564	271,660	200,714	145,000	722,707	424,000	186,202	549,000	30,000	1,189,202	1,911,909
Oct. 28 .	195,000	220,000	402,490	70,000	148,082	1,035,572	215,000	338,514	510,000	.....	1,063,514	2,099,086
Nov. 4 ..	220,000	55,000	792,000	118,000	283,049	1,468,049	230,000	352,666	449,000	.....	1,031,666	2,499,715
Nov. 11 ..	62,000	137,465	433,000	422,500	116,585	1,171,550	423,000	204,085	89,000	.....	716,085	1,887,635
Nov. 18 ..	175,000	220,000	304,000	60,000	289,000	1,048,881	385,000	82,000	317,000	74,000	858,000	1,906,881
Nov. 25 ..	235,000	60,000	404,263	127,990	160,794	988,047	267,000	251,000	191,000	.....	709,000	1,697,047
Dec. 2 ..	110,000	154,905	379,630	317,500	297,367	1,259,402	280,000	185,241	127,000	.....	592,241	1,851,643
Dec. 9 ..	344,819	210,000	1,183,000	75,000	195,000	2,007,819	392,000	75,000	65,000	.....	532,000	2,539,819
Dec. 16 .	150,006	160,000	460,500	121,065	201,000	1,092,565	186,000	155,000	186,000	.....	527,000	1,619,565
Dec. 23 .	.....	60,000	112,000	135,000	216,876	523,876	263,000	262,000	167,000	80,000	772,000	1,295,876
Dec. 30 .	170,000	108,115	471,000	65,000	177,140	991,255	409,000	170,000	283,000	.....	862,000	1,853,255
Jan. 6 ..	85,000	213,000	695,300	193,000	231,000	1,417,300	286,000	263,000	260,654	.....	809,769	2,227,069

NOTE—Figures compiled by American Petroleum Institute.

CRUDE AND REFINED MARKET QUOTATIONS

Crude Oil Prices

Jan. 13.—Effective this morning, the Prairie Oil and Gas Company advanced all posted grades of Kansas, Oklahoma and North Texas crude 10 cents a barrel in fields where the company buys. Two new grades were established for oil testing 39 degrees and above.

Jan. 15.—Magnolia met raise of ten cents and raised Corsicana light and Thrall 10 cents.

Jan. 17.—Prairie raised all Oklahoma, Kansas and North Texas grades of oil 10 cents.

Jan. 15.—Ohio Oil Company advanced Grass Creek, Elk Basin, Lance Creek, Big Muddy, Mule Creek and Rock Creek crudes 10 cents. Sunburst crude, below 28 gravity, 80 cents; 28 to 33.9 gravity, 90 cents; 34 gravity and above $1, also advanced Lima, Indiana, Wooster, Illinois, Princeton, Plymouth and Waterloo 10 cents.

Jan. 16.—Joseph Seep Purchasing Agency advanced Pennsylvania, Corning, Cabell, Somerset medium and Somerset light.

Jan. 18.—Joseph Seep Purchasing Agency advanced Pennsylvania, Somerset, both grades, and Cabell 10 cents.

Jan. 18.—Ohio Oil Company advanced Lima, Indiana, Wooster, Illinois, Princeton, Plymouth and Waterloo 10 cents. Same company made same advance on Grass Creek, Elk Basin, Lance Creek, Big Muddy, Mule Creek. Rock Creek and all grades Sunburst crudes.

	Jan. 18 1923	Jan. 17 1922
EASTERN STATES		
Cabel	$2.31	$2.36
Pennsylvania	3.45	3.50
Ragland	1.10	1.15
Corning	2.00	2.15
North Lima	2.18	2.48
South Lima	2.18	2.48
Wooster	2.10	2.70
Somerset, heavy	2.10	2.40
Somerset, light	2.35	2.15
Illinois	1.98	2.77
Indiana	1.98	2.28
Plymouth	1.35	1.65
Princeton	1.98	2.27
Waterloo	1.45	1.75
LOUISIANA		
Haynesville, Homer and Caddo (12-5-22)		
39 gravity and above	$1.80	1.85
37 to 38.9 gravity	1.60	...
35 to 36.9 gravity	1.40	...
33 to 34.9 gravity	1.25	...
30 to 32.9 gravity	1,10	...
Below 30 gravity	.75	...
Bull Bayou: (12-12-22)		
38 gravity and above	1.40	1.90
35 to 37.9 gravity	1.30	1.80
32 to 34.9 gravity	1.25	1.75
De Soto Crude (12-12-22)	1.60	2.00
Chrichton Crude (12-12-22)	1.25	1.75
Bellevue (Bossier Parish)	.75	...
Jennings crude	1.25	1.25
Vinton	1.25	1.25
Edgerly crude	1.25	1.25
CALIFORNIA (1-6-23) (Crude oil prices at the well)		
14 to 19.9 gravity	.60	1.10
20 to 20.9 gravity	.62	1.16
21 to 21.9 gravity	.65	1.20
22 to 22.9 gravity	.70	1.25
23 to 23.9 gravity	.75	1.31
24 to 24.9 gravity	.80	1.38
25 to 25.9 gravity	.85	1.46
26 to 26.9 gravity	.90	1.55
27 to 27.9 gravity	.95	...
28 to 28.9 gravity	1.00	...
29 to 29.9 gravity	1.05	...
30 to 30.9 gravity	1.11	...
31 to 31.9 gravity	1.17	...
32 to 32.9 gravity	1.24	...
33 to 33.9 gravity	1.31	...
34 to 34.9 gravity	1.38	...
35 gravity and above	1.45	2.45
CANADIAN CRUDE		
*Petrolia	2.38	2.88
*Oil Springs	2.45	2.95
*Plus 52½ cents bounty.		
WYOMING-MONTANA		
Elk Basin	1.70	1.90
Grass Creek	1.70	1.90
Rock Creek	1.35	1.50
Lance Creek	1.70	1.90
Mule Creek	1.10	1.30
Big Muddy	1.25	1.40
Salt Creek	1.15	1.40
Osage	1.60	1.90
Cat Creek (Montana)	1.60	1.90
Sunburst:		
Below 28 gravity	.90	...
28 to 33.9 gravity	1.00	...
34 gravity and above	1.10	...
Landers	.80	.87½
KENTUCKY		
Western (Indiana Ref. Co.)	1.65	1.95
OKLAHOMA (Healdton, Cement, Beaver Creek and Walters.)		
Below 28 gravity	.65	...
28 to 30.9 gravity	.75	...
31 to 32.9 gravity	1.20	...
All other fields:		
Below 28 gravity	1.10	2.00
28 to 29.9 gravity	1.20	...
30 to 32.9 gravity	1.30	...
33 to 34.9 gravity	1.45	...
35 to 36.9 gravity	1.60	...
37 to 38.9 gravity	1.80	...
39 gravity to 40.9	2.00	...
41 gravity and above	2.20	...
KANSAS (1-17-23)		
Below 28 gravity	1.10	2.00
28 to 29.9 gravity	1.20	...
30 to 32.9 gravity	1.30	...
33 to 34.9 gravity	1.45	...
35 to 36.9 gravity	1.60	...
37 to 38.9 gravity	1.80	...
39 to 40.9 gravity	2.00	...
41 gravity and above	2.20	...
ARKANSAS		
35 to 36.9 gravity	1.40	2.00
33 to 34.9 gravity	1.25	...
30 to 32.9 gravity	1.10	...
Below 30 gravity	.75	...
Smackover (1-3-23)		
26 gravity and above	.75	...
Below 26 gravity	.30	...
TEXAS		
Corsicana, light	1.10	1.30
Corsicana, heavy	.65	.95
Thrall	1.60	...
Mexia (12-28-22)	1.55	1.00
Currie 40 gravity (12-28-22)	1.80	...
Rockdale-Minerva	1.50	....
Gulf Coast (ex. Pierce Junction, Blue Ridge and Hull)	1.25	1.25
Nacogdoches	2.50	...
Pierce Junction, Grade A	1.25	1.25
Pierce Junction, Grade B	.80	.80
Hull, Grade A	1.25	1.25
Hull, Grade B	.80	.80
Blue Ridge	.80	.80
NORTH TEXAS (1-17-23) (Including Burkburnett, Ranger, Electra, Stephens County)		
Below 28 gravity	1.10	...
28 to 29.9 gravity	1.20	...
30 to 32.9 gravity	1.30	...
33 to 34.9 gravity	1.45	...
35 to 36.9 gravity	1.60	...
37 to 38.9 gravity	1.80	...
39 to 40.9 gravity	2.00	...
41 gravity and above	2.20	...

Refined Prices

Group Three Territory

(In tank car lots, f. o. b. Group Three refinery, Oklahoma, or freight rate adjusted.)

Gasoline and Naphtha		
48-50 450 end point Naphtha	10½	10¾
50-52 450 end point Naphtha	10¾	11
56-58 450 end point	11	11¼
56-58 437 end point (New Navy)	11¼	11½
58-60 437 end point (New Navy)	11¾	12
60-62 400 end point	13½	13¾
64-66 370-375 end point (export specification)	15¼	15½
68-70 350-360 end point	16¼	16½
Natural Gasoline		
Grade A 72-78, not over 375 end point, rec. 90%	12¾	13
Grade B 76-82, not over 375 end point, rec. 85%	12¼	12½
Grade C 80-88, not over 350 end point, rec. 78%	11½	11¾
Grade D 88-92, not over 350 end point	11½	11¾
Motor Natural Gasoline (Blends)		
Grade 1 58-62, not over 437 end point, rec. 91%	10½	11
Grade 2 58-62, not over 450 end point, rec. 90%	10¼	10¾
Grade 3 64-66, not over 440 end point, rec. 88%	11½	11¾
Grade 4 66-70, not over 435 end point, rec. 85%	11¾	12
Cylinder Oils		
600 Bright filtered	26	28
600 Light filtered	15½	16
600 Steam refined, olive green	5½	6
600 Steam refined, dark green	4½	5
Burning Oils		
41-43 Kerosene A. T.	4¼	4½
42-43 Kerosene A. T.	4½	4¾
38-40 Lt. Straw Distillate	3½	3¾
45-47 W. W. Distillate	6	6¼
46-48 W. W. Distillate, 500 end point	7	7¼
Wax		
124-126 White Crude Scale (lb)	2¼	2⅜
Fuel Oils		
32-36 Gas Oil	2⅞	3⅛
24-26 Fuel Oil (bbl)	$.95	$1.00
Buyers Cars	.90	.95

Fleet of Tankers Put in Service to Move California Oil to Eastern Ports

Los Angeles, Jan. 12.—As a part of the program of moving fuel oil, or low gravity crude, from the West Coast to the Atlantic Seaboard in fulfillment of Government fuel contracts, as well as for application to domestic requirements, in lieu of Mexican oil, a fleet of tankers has been put into service via the Panama Canal.

The price of crude oil of low gravity has not changed in California, in the face of a drop of as much as 50 cents a barrel in the price of high gravity crude, since July 25, 1922. It is the low gravity crude and refinery residuum which is going to fill the fuel oil obligations of companies taking care of the West Coast trade, as well as supplementing the output of similar products from the fields of Mexico, for the East Coast trade.

At this time, a number of tankers are headed for California, mainly for San Pedro harbor, and some have recently cleared with cargo. The Dillwyn, Shipping Board Vessel, sailed January 10, with 70,000 barrels of oil, and the British Tankers San Fraterno and Akera also cleared with oil from the local harbor on the same day.

Robert L. Hague, Manager of the Marine Department of the Standard of New Jersey has been in California this week arranging the details of his plans for moving oil to the East coast, on his company's Shipping Board Contract.

The Chester Sun, American Tanker of 4091 tons capacity, left Baltimore December 2, for San Pedro for a cargo of oil for the Shell Company. Robert E. Hopkins and William Rockefeller, both Standard Oil Company tankers, left Philadelphia December 22 for this port, for oil. The Royal Arrow of the Standard Oil Company is returning from Hongkong for cargo of refined oils here, and the Japanese tanker Kiyo Maru left Karatzu on December 24 for oil at San Pedro.

The Cargoyle (Standard Oil Company) is en route to San Francisco from Philadelphia, for cargo, and the F. H. Hillman (also Standard Oil Company) left Port Arthur, Texas, January 8 for San Francisco harbor.

For All Storage Requirements

Maloney Tanks are adaptable for crude, gasoline or water storage and meet every condition—whether for industrial, refining or field use. Tight deck construction.

Accurate, durable and dependable, Maloney Tanks prevent losses from evaporation and offer full value to purchasers. Ask those who use them.

Sizes 60-Bbl. to 2000-Bbl., Inclusive

Ask For Catalog C

Maloney Tank Manufacturing Co.

Tulsa, U. S. A.

Details Are Expected In Pittsburgh Merger

Pittsburgh, Pa., Jan. 15.—Details of the proposed merger of Transcontinental Oil and Arkansas Natural Gas with the Union Oil Company of California may be forthcoming shortly. Plans for the merger are in the hands of attorneys and it is known that several New York banking firms are interested in the underwriting.

Washington, Jan. 15.—Senator Harreld, of Oklahoma, has introduced a bill in Congress under the terms of which, if adopted, one-half of all bonuses received by the United States Government from oil leases on lands within the borders of Oklahoma would be turned over to the State. Such oil funds would be used for the support of the Oklahoma public schools and for the maintenance of its highways.

Mountain States to Have Pipe Line Outlet

(Continued from Page 92.)

From the field to Greybull there is a 3-inch line.

Warm Springs

Alliance Oil and Refining Company—Nine miles of 4-inch pipe line connect this field with the refinery at Thermopolis.

MONTANA

Cat Creek

Elk Basin Consolidated Petroleum Company—In 1921 this company made a 4-inch line of its double 2-inch and 4-inch lines laid in 1920 from the Cat Creek field to Winnett, a point on the Chicago, Milwaukee and St. Paul railroad line, a distance of 22 miles.

Montana Independent Pipe Line Company—In 1921 this company laid a 6-inch pipe line from the Cat Creek district to loading racks at Winnett.

Ohio-Sunburst Companies—The Ohio Oil Company and the Sunburst Oil and Gas Company are reported to have plans under way for the laying of a gas pipe line from the Ohio's No. 1 Berg, north of Shelby to this town. The Ohio has a 5,000,000 cubic foot gasser, it is said.

Kevin-Sunburst

Illinois Pipe Line Company—Now building or will have soon a 6-inch line from the Kevin-Sunburst oil district in Toole County, Northern Montana, to Coutts, Alberta, Canada, where the Imperial Oil Company has loading racks. It probably will be laid from the town of Sunburst where the Ohio Oil Company has loading racks and a storage farm.

By Actual Performance—

"The Peer of Oil Field Belts"

Proven the leader over years of service

Because—

It's made for the job

Rossendale-Reddaway
BELTING AND HOSE COMPANY, NEWARK, N. J.
General Sales Office:
WOOLWORTH BLDG., N. Y. C.
Representatives:

LEE V. McANELLY
2117 Magnolia Bldg.
DALLAS, TEX.
Phone T-4841

J. W. KIRKBRIDE
No. 8 N. Cheyenne Ave.
TULSA, OKLA.
Phone Osage 1378

MOUNTAIN STATES PRODUCTION

Casper, Wyo., Jan. 15.—The daily average pipe line runs from the Rocky Mountain district for the week ending January 13 follows:

	Barrels
Salt Creek	57,890
Cat Creek	7,350
Rock Creek	5,200
Grass Creek	4,610
Big Muddy	3,410
Lost Soldier	3,000
Elk Basin	2,046
Osage	1,060
Ferris	900
Lance Creek	740
Hamilton Dome	530
Pilot Butte	110
Lander	105
Sunburst	80
Greybull, etc.	45
Other Fields	475
Total	87,491

Reduction in Pipe Line Runs Causes Big Slump

Casper, Wyo., Jan. 15.—A reduction in the pipe line runs from Salt Creek from 40 to 20 per cent of the total production caused a slump in the runs from this field. The figures show that the pipe lines took only 57,890 barrels as compared with about 86,000 taken the previous week. This is done so that field storage can be cleaned up preparatory to taking a 100 per cent production test of all wells in order to obtain a basis for a new pro-rating of all the leases. This action came shortly after the meeting of the conservation committee in Denver last month.

As soon as the field storage has been depleted to afford room for this big test, the district probably will be divided into four zones. All companies in the field wanting a new test will be given an opportunity to have one made.

Sheldon Dome Test Fails to Show for Producer; Will Be Drilled on Deeper

Casper, Wyo., Jan. 16.—The Marine Oil Company has taken over the weil of the Superior Syndicate on Sheldon Dome, west of Riverton, and has agreed to deepen it to the fourth Wall Creek sand if necessary. The Marine Company to receive a substantial interest in the acreage of the Superior, Royal Oil and several individuals owning prospective lands on Sheldom dome.

Casper, Wyo., Jan. 13.—One of the biggest disappointments of the year was the finding of water in the Superior Syndicate well on Sheldon Dome northwest of Riverton. This structure loomed as one of the most promising of wild cat territories at the close of 1922 and was regarded as a new oil district. There was considerable oil and gas found in drilling this test.

Drilling in was started this week after a delay of several weeks while the hole was being cleaned and the casing set. Only 10 feet into the sand, a flow of water was detected and the report is that 10 barrels came from the casing in 12 hours. The well flowed by heads in one day, each being about 60 barrels with about 1,500,000 cubic feet of gas daily.

Hope of getting a producer has not been abandoned, and the well is to be thoroughly tested before it is cased off. It also has been definitely decided to drill to the sand said to be down 100 feet deeper.

The Western States Oil & Land Company 29-AX test on the southwest quarter of section 17-39-78 is expected to be a completion within the next two weeks. It is said to be swedging the casing at the bottom of the hole at 2535 feet atop the second Wall Creek sand. The 8¼-inch casing has collapsed and it will be necessary to cement in another string of pipe before drilling in.

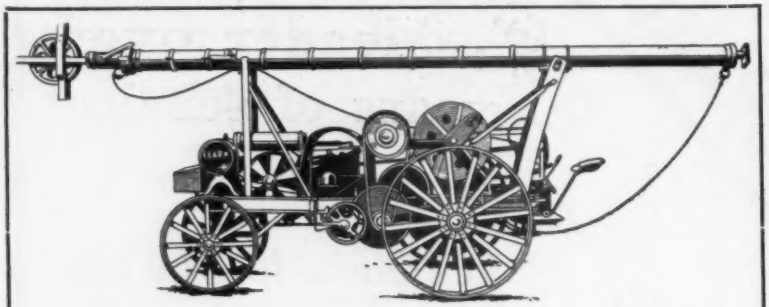
Montana Oil Operators Form New Organization

Billings, Mont., Jan. 15.—Leading oil operators of Montana gathered here on the fifth day of January at the call of J. C. Peters of the Homestake Oil Company for the purpose of organizing an oil operators association. Mr. Peters was named as chairman and I. O. Deschon, editor of the Montana Oil Journal of Great Falls, was elected as secretary. A permanent organization was perfected at a later session held in Great Falls, Mont.

A standard rig is being used for the test to be drilled on Toluca structure on the Peter Ellington ranch, two miles northwest of the town of Toluca. A light oil may be encountered at 700 feet, geologists believed. Operations are to start at once.

Montana Wildcat Gets Good Showing of Gas

Great Falls, Mont., Jan. 15.—A gas flow has been encountered in the Woody test now being drilled 25 miles southwest of Woody, Mont., according to reports from Hardin. The casing is being run now in order to shut off the water flow. It is reported that oil may be found in the lower sands said to be within the next few hundred feet.



Furnishes Its Own Power

This Clark pulling machine runs up to the well and pulls rods and tubing, or bails the well under its own power, furnished by a 30 h. p. engine.

It is economically operated, soon saves its first cost, and is the most efficient machine offered for this work.

Write us and we'll go into details as to why.

CLARK MACHINE CO.

Wichita Falls, Texas

MOORE
TUBULAR STEEL
DERRICKS

"Exceptionally Strong for Pulling Casing"

Every oil man who has put a Moore derrick to the test will heartily endorse the above statement made by the Division Superintendent of a large gas company.

The Carter Oil Company's rig shown above, an 84′ 4″ Moore driller, parted a 15½″ casing in the pulling. Here are a few other examples, culled from a letter received from J. Fye, Division Superintendent, at Waynesburg, Greene County, Pa., of the Philadelphia Company, using Moore derricks:

1. **We have parted long strings of 8¼″ casing without the use of shear poles.**
2. **We recently dropped a string of 5-3/16″ casing which was 2852 feet long. We fished it out, probably making a dozen runs. Some of this casing was so crooked when pulled out that it would be impossible to run it again.**

Good Results a Certainty

The recognized supremacy of the Moore steel derricks is due to the **consistently** good record of every Moore derrick when put to the test, both in drilling and in pulling casing.

When you get a Moore derrick, these good results amount to a certainty—because every Moore derrick is an engineering job in which every element of stress and strain has been practically and scientifically anticipated.

The Safe Working Loads of Moore derricks are figured with a margin of safety of 4. Their ultimate strength thus being four times greater than their rated capacity, the Moore derrick is the safest derrick you can possibly use. Regular rated capacities range from 20,000 lbs. up to 400,000 lbs.

84′ 4″ Moore Duplex Driller, Carter Oil Company well No. 5, F. D. Allen Farm, Burbank, Okla.

Send for 52-page illustrated catalog of Moore Steel Derricks and Steel Drilling Rigs

LEE C. MOORE & CO., Inc.

Established 1907

Pittsburgh, Pa.

Branch Offices and Warehouses:

Midwest Bldg. Casper, Wyo.
Atlas Life Bldg. Tulsa, Okla.
Magnolia Bldg. Dallas, Texas
Union Trust Bldg. Parkersburg, W. Va.
P. O. Box 339 Shreveport, La.
California Representative Buck and Stoddard
California St. San Francisco
Union Oil Bldg. Los Angeles

New Theory Will Be Tried in Test to Be Drilled in Central Alberta, Canada

Calgary, Alta., Jan. 13. — The Irma-Viking-Wainwright district of Central Alberta, which so far has developed a large gas production but no commercial oil, is to be tested for oil on the basis of a new theory worked out by M. A. Allison, an experienced driller. Mr. Allison, who handled the Imperial Oil, Ltd., Grattan No. 1, near Fabyan, has relinquished his position with that company and will undertake development work independently. He has secured about 2800 acres of territory in Central Alberta and will commence drilling next spring.

The Irma - Viking - Wainwright area has already been pretty well tied up by various interests. Imperial Oil, Ltd., has upwards of 40,000 acres. The Imperial holdings are largely in the vicinity of Irma. The Talpey-Arnold Syndicate, a Canadian development subsidiary of the Union Oil Company of California, has holdings nearly as large, something around 35,000 acres, centering around Birch Lake. Their test at Birch Lake, section 5-35-4w4, is now drilling below 2000 feet. The Northern Alberta Natural Gas Development Company controls practically the entire area of six townships, its holdings lying to the northwest of Irma and extending to Viking. This company has drilled nine producing gassers, and has at last reached a definite arrangement for the marketing of the output to Edmonton, a project which will require 75 to 85 miles of pipe line, to be built this year. The Northern Alberta venture recently passed into the hands of New York interests, but the original promoters apparently reserved the right to test the leases for oil, and are reported to be getting ready to do some drilling.

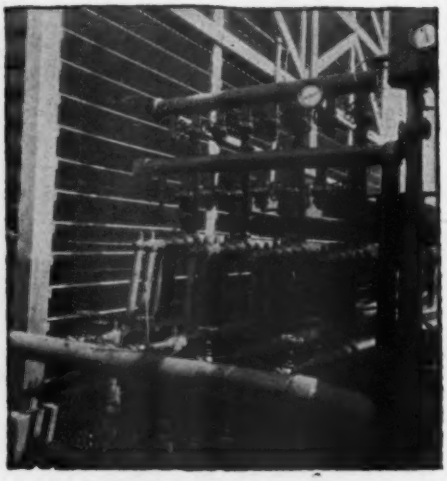
Outside of these large holdings, smaller local companies are taking some part in development. British Petroleums, Ltd., are down over 1300 feet with a rotary test on section 36-45-7w4. The Wainwright Oil and Development Company, section 36-44-7w4 started last summer with a light rig but after making about 200 feet had to shut down; work will be resumed with a heavier rotary outfit.

So far, something like 12 large gassers have been drilled in various parts of the Irma-Viking-Wainwright area, and a number of oil showings have been encountered, but no commercial oil. Mr. Allison's proposed operations, to be commenced next spring, are founded on the theory that small folds or anticlines in various parts of the terrace structure will yield oil. He is planning to drill a series of tests for structure with a light rotary outfit. The drilling so far has invariably encountered a heavy cap rock, under which the formation is believed to be uniform. Mr. Allison expects to locate this cap rock in a series of structure tests, between 700 and 900 feet, and then to select a point midway between the highest and lowest elevations as a location for a deep test, where oil may be looked for without the complications due to heavy gas or water pressure. He is bringing in a light rotary outfit from California and expects to commence actual drilling operations next spring.

In Sweetgrass district, Southern Alberta, the Coutts-Sweetgrass Oils (McLean Syndicate), section 1-1-15w4, has had a lot of trouble with a series of underreamer lugs dropped in the hole. It has, however, succeeded in drilling past these and is now drilling at 2556 feet and seems to be getting into a new sand formation. The six inch casing is at 2550 feet. Imperial Oil, Ltd., is making good headway at Red Coulee, section 5-1-16w4, the test recently resumed at 1360 feet following a protracted fishing job, is now reported below 2000 feet and is, next to the McLean well, the deepest test in the field. The Imperial location is thought to be on a structure independent of the Boundary Dome, on which the McLean well is being drilled, and may reveal somewhat different developments in the next few hundred feet. Outside these two tests, drilling operations in the Sweetgrass district seem to be at a standstill. The Oil Lands Exploration Company has representatives on the ground, but has not yet resumed work on its No. 1, section 2-1-15w4, nor has any work been done on No. 2, section 36-1-11w4. The Canadian-U. S. Oil and Refining Company, which has holdings in the Fort Norman, Great Slave Lake and Pouce Coupe areas as well as some production in the Texas fields, is reported to have secured acreage in Sweetgrass district and may start a test. This company has recently placed a considerable block of stock in the United Kingdom to finance additional development.

Hildebrand Patent Heat Exchanger

DATA ON REQUEST



The Hildebrand Patent Heat Exchanger, of which we have exclusive control, consists of seven or more pipes, ranging from 1¼" to 8" diameter, nested into each other and into an elongated "U" shape. Welded cross connections permit of a continuous, counter-current circulation of hot and cold oil, in alternate channels, with the hot oil in the outside channel.

This Heat Exchanger has a very high co-efficient of heat-transfer, and is used in the Hope Gasoline Recovery Plants.

This is only one of many devices invented and perfected by us in our 15 years of active service in the Natural Gas and Petroleum Industries.

HOPE ENGINEERING & SUPPLY CO.

Consulting and Construction Engineers
MT. VERNON, OHIO
Branches: Tulsa, Oklahoma and Pittsburgh, Pennsylvania

An Unusual Assertion

Each and Every Darling Gate Valve of every size and type is tested for rate of pressure and inspected for flaws.

BECAUSE this factory condition is unusual we are bringing it to the attention of Oil and Gas operators and Refiners.

Darling Gate Valves, in line with our policy of producing only the best in material and workmanship, must pass through six distinct inspections in the course of manufacture in addition to the final test for rate of pressure. There could be no greater effort than this expended to insure Darling Valves reaching you in perfect condition and living up to our claim of superiority.

Details of construction as well as catalog will be gladly sent upon request.

DARLING

DARLING VALVE & MANUFACTURING CO.

WILLIAMSPORT, PENNA.

NEW YORK CHICAGO PHILADELPHIA

OKLAHOMA CITY HOUSTON

Say you saw it in The Oil Weekly

OKLAHOMA PRODUCTION

Tulsa, Okla., Jan. 17.—The daily production of Oklahoma oil fields for the past week was:

Field—	Barrels
Burbank	83,735
Other Osage	39,000
Tonkawa	36,120
Bristow district	63,800
Cushing	29,500
Okmulgee	18,700
Okfuskee County	14,650
Hewitt	28,600
Healdton	17,600
Duncan and Walters	12,100
Other fields	95,000
Total	438,805
Last week	432,865

OKMULGEE DISTRICT COMPLETIONS

Company, Well, Location	Initial Production Bbls.	Depth
Hughes County—		
Indiahoma Ref. Co. Hully 2, SWc NE 5-9-10	500	3415
McIntosh County—		
Iron Mountain Oil Co. Aultman 9, SWc NW NE 24-12-14	¶1	822
McInturff et al Anderson 3, SWc NE NW	¶1½	700
Muskogee County—		
Doop Bros. Manuel 1, C N L SW SE 20-14-16	*	1820
Egolf Bros. James 3, NEc NW NE 19-14-17	¶1	530
Skelly Oil Co. Smith 16, C S L SE SE 3-14-15	*	1592
Okfuskee County—		
Fisher & Umbree Lucinda 1, SEc SW 25-10-11	60	3145
Gibraltar Oil Co. Fields 1, SEc NW SE -11-11	60	2698
Jennings et al Miller 3 NWc SE NE 2-10-9	¶15	3037
Josey Oil Co. McCoy 1, SEc NW 33-12-11	75	2740
Kemp & Jennings Cully 2, NEc SW NW 12-10-9	*	3147
Malcona Oil Co. Harjo 1, SEc NW NW 9-11-9	*	3347
Moffett et al Summers 1, NEc SE NE 17-11-12	20	1647
Pure Oil Co. Yaree 1, NWc NE 1-10-8	¶3	2985
Okmulgee County—		
Black Pet. Co. Rowe 1, SEc NE NW 8-15-14	15	1750
Cosden O. & G. Co. Gray 7, SWc NE 12-13-13	20	2435
Diamond Pet. Co. Bruner 7, C E L NE NW 15-12-13	50	1770
General Inv. Co. Fife 1, NWc NE 33-11-13	*	3153
Hullebarger et al Hallerman 4, NEc SE 13-13-13	15	1765
Jillison et al Brown 2, C E L NE SE 18-12-13	¶1½	1975

Tonkawa Production Increases and North Extension Is Added to Field

Tulsa, Okla., Jan. 16.—Another high mark in production and an extension to the north were put to the credit of the Tonkawa pool last week. Production for the week was 36,120 barrels daily, with 75 wells producing at the end of the week.

The well extending the pool was completed Saturday by Amerada Petroleum Corporation, Goltra 2, southeast corner of the southwest of the northeast quarter of section 34-25-1w. It extends the producing limit of the north end of the field a quarter of a mile.

In the first twenty-four hours this well produced 2280 barrels from sand topped at 1950 feet and drilled 12 feet. Most of the wells now producing in this part of the field are from the lowest sand, found below 2600 feet. Most locations, however, have two wells drilling, some having three, others four and one location has five wells drilling.

This well completed by the Amerada Company not only extends the field, but establishes the fact that production from two or more sands can be expected as in other parts of the field.

Since the Sinclair and Cosden companies began stringing pipe for lines into the Tonkawa field, the Gulf Pipe Line Company of Oklahoma has had engineers in the field making surveys and other preliminary work for a line. The Gypsy Company, subsidiary of the Gulf in Oklahoma, has daily production in excess of 5,000 barrels in the field, with indications that it will be increased, as this concern has two of the choice quarter sections of the field.

Although the north part of the field claims a majority of the 122 drilling wells at Tonkawa, the older part, the south "high" point in Noble County is being watched closely, since the Marland and Cosden companies have decided to drill deeper in the discovery well of the field.

This well was completed June 29, 1921 for 1,000 barrels at 2660 feet. It averaged around 500 barrels for the first year. Since then it has been drilled deeper and cleaned out several times and the production has decreased. Further drilling has shown this to be an "edge" well. Now it is to be used for a test of possible deeper sands. It may be carried to around 3200 feet.

In addition to the 122 drilling wells, the Tonkawa field has 40 rigs complete, 17 rigs building, 18 locations and four wells being cleaned out.

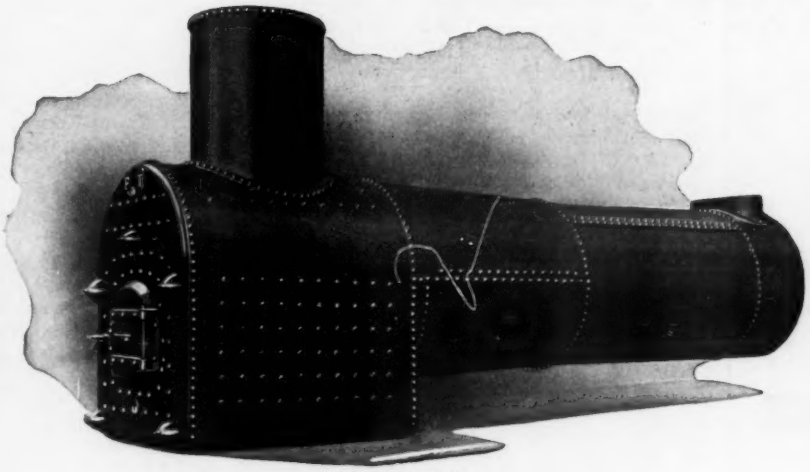
Company, Well, Location	Initial Production Bbls.	Depth
H. E. Jones Sampson 2, SWc SE SW 22-13-15	*	2260
D. C. Lampton Harrison 3, SWc NE SE 18-15-14	*	1895
Kewanee Oil Co. Wright 3, NW cor NE SW 22-14-14	300	1850
King & Jackson Murphy 1, SEc NW 2-13-12	50	1970
Kingwood Oil Co. Sampson 1, NWc SW 36-15-13	*	2425
McCullough et al Brewer 2, C NE SE 17-16-14	*	1650
W. L. McCray unallotted 2, NWc SW 29-12-12	*	3430
Tuderman et al Williams 2, C NW SW 16-16-14	*	2445
Winemiller et al Grant 2, NEc NW NW 9-16-13	10	1080

OKLAHOMA OLD FIELDS COMPLETIONS

Company, Well, Location	Initial Production bbls.	Depth
Creek County—		
J. E. Black Ishmall 2, NEc SW SE 24-18-12	¶5	1525
Callopy et al Carmon 1, NEc SW SW 5-15-8	*	3600
Cosden O. & G. Co. Colaw 4, SEc NE SW 26-16-9	50	3010
Jomack Oil Co. Carr 3, C S L SW NE 36-16-9	200	2970
Morrison et al Perkins 3, C W L SW NW 24-16-10	*	2570
Murrell Oil Co. Davis 5, NEc SW SW 11-17-11	25	1685
Chas. Page Northarky 10, NEc NW SE 2-18-12	*	2200
Schermerhorn et al Rogers 2, SWc NE NE 21-15-8	¶18	1212
Skelly et al Beaver 1, SWc NW NW 9-15-8	250	3260
Prairie Oil & Gas Co., Longfellow 3, 9-15-10	15	2730
Murrell 3-A, 23-16-8	2200	3164
Watson 4, 16-14-8	150	2447
Watson 7, 15-14-8	250	3300
Tulsa County—		
Carter Oil Co. Island 1, SEc SW 15-19-10	*	2378
Marshall et al fee 2, SWc NW NW 27-19-11	¶6	1759
Minot et al Smith 2, SWc SE NE NE 28-19-14	*	1437
Wilmot et al Robinson 1, SWc 14-19-10	*	2090

FARRAR & TREFTS

Oil Drilling Boilers

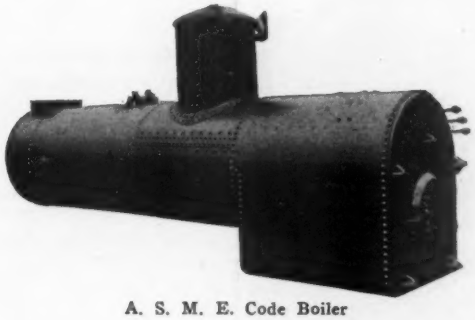


Standard Boiler

Look At Our Boilers

Made in any size or style to meet your requirements. This is the one boiler finished with Care, Judgment and Skill. They speak for themselves. They are known as "The Greenwood Boiler" and will make more steam with green wood than many boilers will with gas.

Measure Them
Weigh Them
Test Their Steel



A. S. M. E. Code Boiler

Examine their construction. Criticise their finish. Compare them with others and you will see at a glance that this is the boiler you need.

Inquire As to Their Sixty Years Record

Orders received by mail, telegraph or telephone promptly attended to.

D. F. CONNOLLY AGENCY, Inc.

623-24 Kennedy Bldg., TULSA, OKLA.

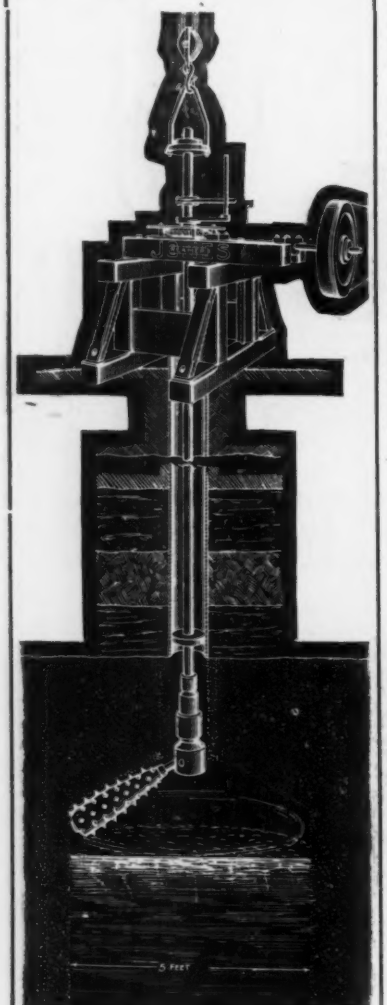
MACWHYTE WIRE LINES BULL ROPES BELTING

Phone Osage 1929 Night Phone Cedar 2798

BOILER REPRESENTATIVES

Los Angeles, Calif., Hillman-Cooney, Inc., 408-9 Higgins Bldg.
Casper, Wyo., Northwestern Supply Co.
Okemah, Okla., Colonial Supply Co.
Shreveport, La., Oil City Iron Works, 204 Strand St.
El Dorado and Smackover, Ark., S. Bender Iron & Supply Co.
Beaumont, Texas, Brooks Supply Co., 799 Franklin St.

Why Not Get ALL The Oil



This Reamer Outfit is easily attached to any Drill Rig or Clean-out Machine.

It will increase production more than any method used in cleaning wells.

Write or Wire for Special Offer

JONES
OIL WELL REAMER CO.
Independence, Kansas
Eastern Office: Oil City, Pa.

Peer Oil Corporation Is Formed Through Merger of Three Producing Companies

Tulsa, Okla., Jan. 15.—Subject to the approval of stockholdres, the Kansas & Gulf Oil Company, the Monarch Oil and Refining Company and the Southern Petroleum Company have been consolidated, forming the Peer Oil Corporation, a Delaware corporation, charter for which already has been granted.

The new corporation will have 1,000,000 shares of no par stock and 50,000 shares of eight per cent perferred stock, par $100. Of the preferred stock, 30,000 shares have been underwritten by a banking syndicate and the $3,000,000 from this stock will be used as working capital of the new company.

Of the 1,000,000 share of no par common stock, 280,000 shares will go to stockholders of the Kansas & Gulf Oil Cmpany in exchange for stock now held of that company. Stockholders of the Monarch Oil and Refining Company will receive 88,000 shares of Peer Oil Corporation stock in exchange for stock now held. Another 52,000 shares will be used is appropriated for purchase of Southern Petroleum stock.

Stockholders of the Kansas and Gulf Oil Company are to meet in Chicago January 20 to pass on the merger. This meeting is a formality, as the consolidation already is assured.

The new company will begin business without any bonded debt. A program of development has been worked out to follow immediately after the consolidation has been passed. Part of this includes the drilling of leases turned into the new concern by the Monarch Oil and Refining Company in the Texas Coastal fields, especially Hull.

While final details have not been worked out as to operation of the company, headquarters are expected to remain in Chicago, where the Kansas & Gulf now has its home office. The Kansas fields are to be developed through an office at El Dorado. The Tulsa office will have charge of Oklahoma, North Texas, the Texas Panhandle and Arkansas. Development in the Coastal fields and Louisiana will be under the Houston office, which will be in charge of R. L. Young.

The Peer Oil Corporation will own 11,748 acres in fee and leases on approximately 85,000 acres in Kansas, Oklahoma, Arkansas, Louisiana and Texas. A subsidiary company has control of Mexican holdings.

NORTH OKLAHOMA COMPLETIONS

Company, well, location	Initial Production bbls.	Depth
Pawnee County—		
Fisher Oil Co. Beardsley 7, SWc SE SW SE 19-20-8	250	2445
Kanola Oil Co. Terlton 5, SWc NE SE SW 19-20-8	20	2460
El Lee town lot 1, NWc SW SE 25-20-9	¶8	1720
Town lot 4, NEc SW SE 25-20-9	¶5	1730
Riverbed 1, NEc SE SW	¶7½	1715
Adrian 2, SWc NE NW 36-20-9	¶3	1745
Hudson 1, SWc NE NE 36-20-9	¶5	1860
Hudson 2, C NE SE NW 36-20-9	¶3½	1818
Magnolia Pet. Co. Robedeaux 2, SWc NE SE SE 22-23-3.	250	2725
Osage County—		
Devonian Oil Co. 1 NEc 10-21-10	25	2144
Douglas Oil Co. 2 SWc NW NW SW 33-24-8	10	665
Evidence Oil Co. 1 SWc NE 16-23-10	*	2110
Grimes Gillespie 5 NWc SW 36-21-12	240	2157
Gypsy Oil Co. 15 C SE NW SE 24-27-6	1800	2990
16 C NE NW SE 19-27-6	1200	2981
Hoover et al 4 NEc SE NE NE 24-23-8	*	950
I. T. I. O. 307 C W L E½ N½ NW 34-25-8	¶4	1195
Laurel O. & G. Co. 10 C SE NW NW 1-25-6	275	2975
Marland Oil Co. 15 C N L NW 34-25-9	50	2138
C. B. Peters 5 C S L N½ S½ NE 6-27-9	15	2340
Owen-Osage Oil Co. 229 C E L S½ E½ NE 2-27-10	*	865
Peters Oil Co. 4 SEc NW SE NE 23-25-9	150	2048
Phillips & Skelly 9 C SW NE NE 25-27-5	500	3960
12 C SW NE SW 24-27-5	900	2990
Sand Springs Home 4 NEc NW 16-21-9	¶8	2250
Simons-Moore 15 C SE NE NE 1-26-5	500	2980
J. C. Stine 3 SWc NW SW SE 9-21-12	10	1334

KANSAS PRODUCTION

Independence, Kansas, Jan. 16.—The Kansas oil fields showed the following daily production for the past week:

Field—	Barrels
El Dorado	19,000
Elbing and Peabody	14,360
Greenwood County	11,450
Fox-Bush	9,800
Florence and Covert	7,250
Blankenship, E. Butler and Sallyard	5,000
Augusta and Douglas	4,500
Leon and Weaver	2,500
Other fields	12,500
Total	86,360
Last week	86,075

KANSAS COMPLETIONS

Company, Well, Location	Initial Production bbls.	Depth
Butler County—		
Empire Gas & Fuel Co. Williams 1, NWc 26-27-5	*	2810
Phillips Pet. Co. Hazlett 4, SWc NW 6-24-5	150	2475
Snowden & McSweeney Parks 1, NWc SE 3-26-9	*	2964
Cowley County—		
Trees Bros. Esch 1, SWc 33-33-6	*	3035
Greenwood County—		
Arkansas River Gas Co. McKenzie 1, NWc NE 11-26-11	*	2259
Barrington Oil Burkett 5, NEc NW 24-23-10	150	2118
Burkett 6, NWc NE NW 24-23-10	110	2130
Smith et al's Robbins 1, SEc NE NW 27-25-8	*	2670
Vickers & Johnson Edwards 1, SEc NE NE 13-23-10	*	2650
Lyon County—		
Orlando Oil Co. Sterben 1, NEc SW SE 27-20-11	*	2755
Ward et al Piper 1, SWc NW SW 16-21-6	35	2463
Marion County—		
Watchron O. & G. Co. Jolliffe 21, C SE SE NW 9-22-4	100	2500

Oil Producers Return to Old Love In Kansas During Year 1922

Tulsa, Okla., Jan. 15.—The year 1922 proved a boon to Kansas. Oil producers drawn away for some three years by the big development of Oklahoma and Texas turned back to the Sunflower State. The end of the year saw development at its height, with indications that 1923 will be a big year in Kansas oil fields.

New pools were numerous in Kansas during 1922. Butler, Greenwood, Cowley and Elk Counties each contributed to the additional oil discoveries.

The Hazlett pool of Butler County, opened by the Phillips Petroleum Company in September, was perhaps the foremost oil strike of the year for Kansas. As yet the extent of the pool has not been determined. The Phillips Company and the Gypsy Oil Company hold the choice acreage and not enough drilling has been done to define the pool. Some of the wells showed better than 1000 barrels initial production, being pumped through 4-inch tubing.

The Seeley, Burkett, Eureka and Prixlee pools are among those uncovered in Greenwood County during the year. These pools lie northeast of the Sallyard pool in the western part of the county, running in a southwest-northeast trend. The development in Greenwood County gained impetus during the whole year. Just now there is a "rush" to get back into the county. Some of the concerns now paying high prices for acreage are those which gave up leases a few years ago in order to get into the development of other parts of the Mid-Continent fields.

Although only one well is producing there, the Cambridge pool of Cowley County is considered the big event of the year there. The Brown well was completed by the Empire Gas and Fuel Company in September. Dry holes have been completed north and west of this well but at such distances that they had little bearing as prospects of the field. The district now has a score of wells near the pay level. Near Winfield, the Wallace-Kukuk pool was opened in Cowley County in the spring and the Olsen pool later in the year.

Cowley County is credited with 100 wells during the year. Many of these were drilled in wildcat territory.

In December Jones and Braden, drilling on the Murphy farm in section 33-21-12, found oil at 1560 feet in the first break in the Mississippi lime. This well, which is good for 200 barrels daily, placed Elk County in the list of Kansas counties which contributed new oil findings during the year of 1922.

The well is 12 miles north of Langton, where a large gas field previously had been developed.

Nelson Well, Though Surrounded By Dry Holes, Is Still Flowing

Tulsa, Okla., Jan. 16.—The Nelson Brothers well in the Robberson pool of Garvin County Oklahoma, completed a week ago for flush production estimated as high as 10,000 barrels, is surrounded by several dry holes, all deeper than the Nelson well.

The Nelson well, however, continues to flow in excess of 5,000 barrels daily, the oil testing 28 degrees Baume. It is No. 5 Jones, in the northwest corner of the southwest of the northwest of the southwest quarter of section 15-1n-3w. Sand was topped at 1542 feet.

One location to the north, the Texas & Pacific Coal and Oil Co., is down 1650 feet, with only 1000 feet of oil in the hole from sand found at 1625 feet. Still farther north the Magnolia Petroleum Co. drilled a cable tool test, Jones No. 2 to 2400 feet, without finding a commercial well.

Nelson Brothers in the southeast corner of the same tract, on which they completed the big well, recently completed a 11,000,000 cubic foot gas well at 1300 feet. Later this was drilled to 1800 feet without finding oil.

Due to the fact that most of the drilling in the Robberson field is done by rotary tools, to the top of the sands, there is no little speculation as to the possibility of the rich sand having been passed up in previous tests in that part of the field.

The Robberson pool now has 115 oil wells and 29 gas wells.

Tulsa, Okla., Jan. 17.—New Moon Oil Company's Dickerson 1, center of northeast, southwest of the northeast, 11-4n-8w, Chickasha gas field, Grady County, is spraying 25 barrels of oil with 5,000,000 cubic feet gas from 3072 to 1442 feet. This is the second well in this field to spray oil.

Muskogee, Okla., Jan. 10.—The Muskogee Tool Company with offices and shops in this city has opened a warehouse at Wetumka, this State, and has installed a complete line of drilling and fishing tools. The company has warehouses at Henryetta, Oklahoma, and Ranger, Texas.

Where Gaso Pumps Are Made

In this modern plant, equipped with every facility for the efficient manufacture of quality pumps, more than 8,000 Gaso Pumps have been produced.

Practically every one of these has gone into oil-field use; every one has been designed especially for oil-field duty; every one has been tested to meet the highest standards of pump manufacture.

The pre-eminence that Gaso pumps have earned in oil-field work is easily understood. Gaso engineers have **specialized** on pumps for oil-field uses. Years of study, experience and improvement are behind every pump that leaves the Gaso factory.

The Gaso family of pumps and fittings is described in a 64-page data book of special interest to oil men. A copy will be sent you on request.

GASO PUMP & BURNER MFG. CO., Tulsa, Okla.

GASO PUMPS
for oil field uses

Say you saw it in The Oil Weekly

Central West Texas Operators Resuming Development With Firmer Crude Market

Fort Worth, Texas, Jan. 17.—Announcement of a 10 cent per barrel increase in the posted price of crude last Saturday has resulted in a number of operators in the Central West Texas district oil fields resuming the development of their holdings, since it is generally believed that other advances will follow shortly. Although drilling activity has been gradually increasing in volume since the middle of last month, field operations reached a low level after crude prices sagged to $1.50 per barrel last summer, and the output of all the major fields has been greatly reduced. The demand for Central West Texas crude is exceptionally good, with the major pipe line companies making special efforts to secure additional connections in the field. Independent crude buyers have lately entered the market for this crude at a premium, owing to the scarcity of uncontrolled crude in the northern part of the state and difference in prices.

A 300 barrel producer was completed early this week in Stephens County when the Prairie Oil and Gas Company shot its No. 12 A. A. Atkins with 60 quarts in the gray lime pay 3200 to 3230 feet. This well is located in the north half of the county in the Eliasville pool, and showed good for 155 barrels before given a shot. In the same territory, Mid-Kansas Oil and Gas Company's No. 9 G. W. Hill, which came in early last month flowing at the rate of 28 barrels of oil per hour at 4052 feet, and established a new deep producing horizon for the county, has since ceased producing. It was drilled to 4135 feet, and given a shot of 80 quarts early this week from 4080 to 4110 fet, resulting in about 1500 feet of oil rising in the hole. It is planned to swab the well. In the Curry-Aetna pool, Humble Oil and Refining Company's No. A-2 O. Curry flowed 25 barrels oil the first day after drilling in the lime pay at 3150 feet. Drilling is being continued below 3200 feet. Lewis Oil Company's No. 1 Dodd is reported showing oil with an increased flow of water while drilling in the black lime below 3370 feet.

The Desdemona-Gorman field, which was discovered last October by Kirk & Brewer, has a daily average output of about 550 barrels from five producing wells. The discovery well is making about 290 barrels, while Iatan-Donnelly's No. 1 Duncan is pumping about 35 barrels daily. Jerome McLester et al have three wells making 225 barrels. The proven area was extended a short distance to the east last week when Jerome McLester et al's No. 1 W. F. Dorman showed good for 125 barrels from 2790 to 2810 feet. Simms Oil Company's No. 1 W. A. Woods, located a short distance southwest of production, is drilling in a black lime at 2935 feet.

The Panhandle Refining Company's No. 1 L. A. Hightower, located in semi-wildcat territory about six miles south of Ranger near Colony Creek, is swabbing about 50 barrels from a shallow sand found from 1210 to 1220 feet.

The Pioneer district in Eastland County maintained a daily average production of 4995 barrels during the past week, or a decrease of 215 barrels. The Gulf Production Company's No. 1 W. L. Pliler, located in the northeast wing of the field, came in late last week good for 100 barrels at 2496 feet.

New York, N. Y., Jan. 13.—Directors of Union Tank Car Company have declared a quarterly dividend of $1.25 on the common stock, payable March 1 to stock of record February 5.

CENTRAL WEST TEXAS PRODUCTION

Fort Worth, Texas, Jan. 16.—The daily average production of the various fields in Central West Texas for the past week is divided as follows:

Stephens County

	Barrels
Mid-Kansas Oil & Gas Co.	3,670
The Texas Co.	3,890
Humble Oil & Refining Co.	2,345
Gulf Production Co.	2,250
Prairie Oil & Gas Co.	1,920
Texas Pacific Coal & Oil Co.	1,570
Magnolia Petroleum Co.	1,725
Fensland Oil Co.	725
Sun Co.	680
Sinclair Oil & Gas Co.	340
Brown & Co.	275
Plateau Oil Co.	230
Pierce Oil Corp.	205
Empire Gas & Fuel Co.	100
Simms Oil Co.	65
Miscellaneous	9,385
Total	29,375
Last Week	30,700

Eastland and Ranger

Texas Pacific Coal & Oil Co.	1,255
Prairie Oil & Gas Co.	1,045
Gulf Production Co.	690
Magnolia Petroleum Co.	510
The Texas Co.	435
Sinclair Oil & Gas Co.	975
Plateau Oil Co.	140
Humble Oil & Refining Co.	105
Empire Gas & Fuel Co.	65
Mid-Kansas Oil & Gas Co.	40
Sun Co.	35
Miscellaneous	6,435
Total	11,730
Last Week	11,585

Desdemona and Pioneer District

Magnolia Petroleum Co.	1,050
The Texas Co.	455
Mid-Kansas Oil & Gas Co.	305
Humble Oil & Refining Co.	485
Texas Pacific Coal & Oil Co.	315
Prairie Oil & Gas Co.	130
Sinclair Oil & Gas Co.	80
Empire Gas & Fuel Co.	25
Sun Co.	10
*Miscellaneous	6,325
Total	9,180
Last Week	9,350

*Includes Pioneer district.

Miscellaneous

	Past Week	Prev. Week
Moran-Shackelford County	2,665	2,955
Strawn-Palo Pinto County	1,255	1,210
Brown County	740	730
Corsicana	625	605
Mitchell County	280	275
Thrall-Williamson County	140	145
Coleman County	110	125

PIONEER DISTRICT PRODUCTION

Fort Worth, Texas, Jan. 15.—The daily average pipe line runs and tank car shipments of crude from the Pioneer district during the week ending January 10 were as follows:

	Barrels
McCamey, Sherrin & Dumas	775
Pennant Oil & Gas Co. and T. B. Slick	625
T. B. Slick	555
Keough et al	430
The Texas Co.	355
Texas Pacific Coal & Oil Co.	315
Rainbowend Oil Co.	235
Duquesne Oil Corp.	225
States Oil Corp.	185
Pennant Oil & Gas Co.	170
Junior Oil Co.	160
Simms Oil Co.	140
Humble Oil & Refining Co.	125
L. A. Knight et al	115
Brown & Co.	70
Herrick et al	70
Invincible Oil Corp.	65
Pioneer Petroleum Co.	50
C. O. Moore	50
Harris & Fisher	40
Owenwood Oil Corp.	35
Miscellaneous	205
Total	4,995
Last Week	5,210

HUGHES

Tool Joints

With Acme (Flat Top) Threads

Trade Mark

Yesterday's, Today's and Tomorrow's Hughes Tool Joints Interchange

Hughes flat top thread Tool Joints pay for themselves BY THE LONGER SERVICE THEY GIVE AND BY INCREASING THE SPEED OF DRILLING.

Made of highest grade (Special Analysis) steel instead of ordinary carbon steel; scientifically heat treated and made thoroughly tough and strong—HUGHES JOINTS LAST LONGER.

The coarse, flat top threads on Hughes Joints make up tight in slightly less than four turns. By making up and breaking out so readily they save much time on every well. Though better steel, design and workmanship all go into making Hughes Tool Joints, their price is no more than that of ordinary joints.

INSIST ON THE HUGHES STANDARD of quality and excellence when you buy Tool Joints.

Ask Your **Supply Store for Hughes Tools**

HUGHES

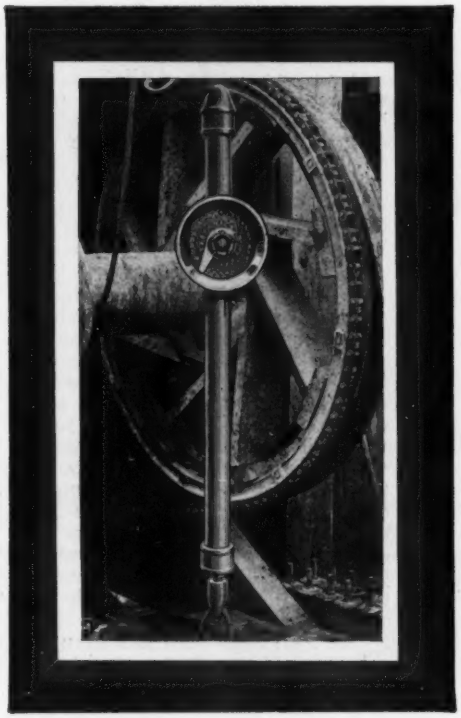
HOUSTON, TEXAS, U. S. A.

Say you saw it in The Oil Weekly

HUGHES

Weight Indicator

For Giving Drilling Weights



Readily "connected up" with any type of Rotary Rig

Too much weight on the drill bit is hazardous. It may cause a "twist off", damaged tools, or a crooked hole.

Not enough weight on the drill bit slows up drilling progress, and lessens the efficiency of the drilling equipment.

THE ONLY MEANS OF KNOWING EXACTLY what weight is on the bit is by the use of the latest invention of the Hughes Tool Company—The Hughes Weight Indicator. Eliminate guess work—use a Hughes Weight Indicator. Send for descriptive booklet.

Trade Mark

TOOL CO.

Branch: Los Angeles, Cal.

Sold by Leading Supply Stores

Say you saw it in The Oil Weekly

NORTH TEXAS PRODUCTION

Wichita Falls, Texas, Jan. 16.—The average daily production of the various North Texas fields for the past week is divided as follows.

Burkburnett

	Barrels
Magnolia Petroleum Co.	3,000
Kansas & Gulf Co.	1,575
Gulf Production Co.	1,100
The Texas Co.	1,020
Humble Oil & Refining Co.	840
Panhandle Refining Co.	640
McMan Oil & Gas Co.	570
Texhoma Oil & Refining Co.	565
Oklahoma Petroleum & Gas. Co.	355
American Refining Co.	465
Skelly Oil Co.	280
Middle States	330
Ryan Oil Corp.	325
Sinclair Oil & Gas Co.	85
Miscellaneous	13,075
Total	24,225
Last Week	26,855

Electra

The Texas Co.	5,875
Magnolia Petroleum Co.	4,190
Empire Gas & Fuel Co.	3,150
Middle States	2,340
Texhoma Oil & Refining Co.	1,440
Gulf Production Co.	930
Griswold Oil Co.	745
Humble Oil & Refining Co.	210
Fort Dearborn Oil Co.	125
Panhandle Refining Co.	70
Miscellaneous	5,015
Total	24,090
Last Week	23,915

Young County

Roxana Petroleum Corp.	1,035
Penn Cities Oil Co.	545
Fred B. Foster & Co.	510
Cosden Oil & Gas Co.	470
Panhandle Refining Co.	435
Ralco Oil Co.	360
Sinclair Oil & Gas Co.	350
Godley Oil Co.	305
Conner et al	255
Mutual Oil Co.	295
Gulf Production Co.	235
Seaboard Oil & Gas Co.	235
North American Oil & Refining Co.	230
Eureka Producing Co.	225
Associated Oil Co.	220
Simms Oil Co.	220
Hemphill Interests	195
New Domain Oil & Gas Co.	190
Mahlstedt Mook Oil Co.	180
Sun Co.	170
Sacks & Henderson	165
Okla. Petroleum & Gasoline Co.	155
Westerfelt & Noble	145
Emerich Oil Co.	140
The Texas Co.	135
Colcord et al	130
Union Oil Co.	130
Bertrand et al	120
Miscellaneous	745
Total	8,525
Last Week	10,250

Miscellaneous

Holliday-Archer County	4,920
Kemp-Munger-Allen	1,265
Iowa Park	840
Petrolia	305

North Archer County Pool Extended By 100 Barrel Well; Depth 1760 Feet

Wichita Falls, Texas, Jan. 16.— Extending the Ferguson pool in Northern Archer County about one-half mile to the southeast, Featherstone and associates' W. P. Ferguson 1 is flowing 100 barrels by heads from a sand at 1758 to 1760 feet and has resulted in a chain of locations being made for tests to be drilled between it and the former limits of the pool. The Featherstone well is being standardized to complete and will probably test better than 100 barrels. The Ferguson pool maintained a daily average production of 2,000 barrels during the first week in this month from 37 flowing and pumping wells, and only seven wells are reported making salt water along with the oil. This salt water trouble is avoidable in most instances, and is the result of the drillers attempting to take too much pay sand.

Both the Ferguson and Texhoma-Gose pools are experiencing a greater amount of drilling activity, and during the first two weeks of this month 15 new locations were made in these two producing areas in addition to seven locations for wildcat tests in various sections of the county. Since the bulk of the oil produced in Archer County is high gravity and commands the top price, with many producers receiving a premium above the posted price, the operators are rushing the development of their holdings and acreage is in big demand. Three pipe lines are already serving the county, and the Gulf Pipe Line Company expects to have a line in the county before another week.

The Ferguson pool has been developed at a rapid pace during the past two months, and owing to the acreage in the heart of the pool being chopped up in small tracts and owned by different concerns, operations must be speeded up to protect leases from offsets. The Freeman and Hampton Syndicate, which brought in the discovery well, is the largest producer in the pool, having a daily average of 420 barrels during the first week in January from 8 wells. The Texhoma-Knight Interests are second with a daily average of 345 barrels from 5 wells.

Lanning & Moninger's T. B. Wilson 1, which was reported last week as proving up new territory in Northern Archer County from 1632 to 1635 feet, has been put on the pump as tested 155 barrels during the first 24 hours. In the Ferguson pool, Bass & Dillard's K. & K. 1 pumped 260 barrels on a 24 hour test early this week from 1563 to 1572 feet. Simms Oil Company's Ferguson 1 gives promise of extending the deep pay a short distance to the south, and early this week was setting casing on a sand from 1770 to 1773 feet.

Although wildcat activity in Archer County has been mostly in the north half, considerable interest is now centered around the southwest corner, where the Sun Company brought in a small pumper early last year on the Farmer ranch. This company has made location for a second test to be drilled in the northwest corner of the Bell County School Lands, Abstract 12, and other concerns are making locations for tests to be drilled shortly.

Below is a daily average production report by leases of the Ferguson pool during the first week in January:

Company and Lease—	No. of Wells	Daily Av. Prod.
Freeman & Hampton Syndicate, W. P. Ferguson	8	420
Texhoma & Knight Interests, W. P. Ferguson	5	345
Shaw et al, W. P. Ferguson	1	195
Shaw et al, Kemp & Kempner	1	55
Staley et al, Kemp & Kempner	7	235
Staley et al, W. P. Ferguson	2	5
Kay Dee Oil Company, W. P. Ferguson	3	205
Sunshine State Oil & Ref. Co., W. P. Ferguson	4	185
Scott & Bower, W. P. Ferguson	1	110
Gulf Production Company, W. P. Ferguson	1	100
White Oil Corporation, Kemp & Kempne	1	100
R. E. Shappell et al, Kemp & Kempner	1	35
Humble Oil & Refining Co., Kemp & Kempner	2	10
Totals	37	2000

Tulsa, Okla., Jan. 17.—After a shot, production of Sapulpa Refining Company's wildcat well, section 15-27-5, Kay County, increased to 1000 barrels in 24 hours.

MORAN-SHACKELFORD COUNTY COMPLETIONS

Company, well, location	Initial Production bbls.	Depth
Barber et al's Mrs. Mary A. Cook 3	20	615
Calloway et al's Pritchard 2	20	645
Chenault Oil Co.'s English 16	10	610
Deane Oil Corp.'s Merriott Heirs 1	†	1880
Kendrick et al's Carter 2	8	635
Rardin & Hill's Morris 1	*	655
Revere Oil Co.'s English 2	6	600
Roxana Petroleum Corp.'s Rice 2	10	545
Sam J. Scupas' Rice 1	*	670
Seymour et al's Kendrick 1	*	1155
Stewart & Marshall's Pritchard 2	7	615
Wall et al's Robinson 1	3	120
Wallace et al's Waters 7	6	525

STEPHENS COUNTY COMPLETIONS

Gholson et al's Gohlson 1	45	2105
Swensondale Oil Co.'s Swenson 24	45	1800
Revere Oil Co.'s Ackers 3	*	3230

EASTLAND COUNTY COMPLETIONS

Forrest Miracle Oil Co.'s King 2	25	2470
Gulf Prod. Co. W. L. Piller 1	100	2496
Panhandle Refining Co.'s L. A. Hightower 1	50	1220
Simms Oil Co.'s Bonner 2	*	3080
T. B. Slick's M. A. Sheppard 3	45	2525

DESDEMONA-GORMAN COMPLETION

Jerome McLester et al's W. F. Dorman 1	125	2810

ELECTRA COMPLETIONS

Carteret Oil Co.'s W. T. Waggoner 3	5	700
Darnell & Bannon's J. & J. Waggoner 3	*	1681
Griswold Oil Co.'s S. B. Burnett 34	50	1660
Hartford Trust Co.'s S. B. Burnett 9	8	695
Hochaday & Shaw's W. T. Waggoner 3-B	25	1624
Ladd et al's W. T. Waggoner 2-B	15	699
Lewis Oil Corp.'s W. T. Waggoner 2	75	1521
W. T. Waggoner 3	100	1491
McKenna & Moore's W. T. Waggoner 5	*	2024
Magnolia Petroleum Co.'s Rio Bravo 16	240	1960
Rio Bravo 17	350	1945
Texhoma Oil & Ref. Co.'s W. T. Waggoner 5-C	*	1956
Texland Oil Co.'s J. & J. Waggoner 2	*	1970

YOUNG COUNTY COMPLETIONS

Gulf Production Co.'s Carmack 3	*	3800
A. B. Perry 1	25	1891
Monroe Oil Co.'s S. M. J. Benson 1	*	1105
The Texas Co.'s J. Jones 3	*	4190

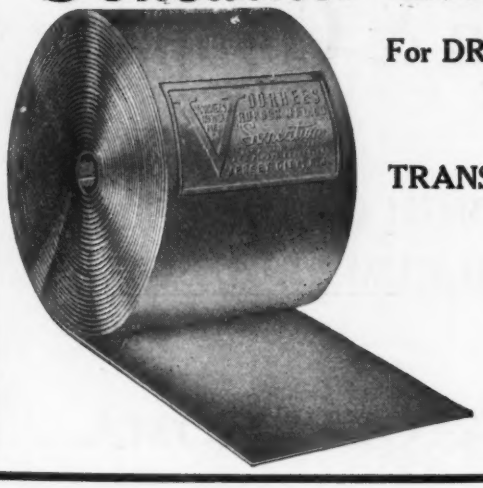
ARCHER COUNTY COMPLETIONS

Company, well, location	Initial Production bbls.	Depth
F. & H. Synd.'s W. P. Ferguson 6	90	1753
W. P. Ferguson 7	90	1592
Hackman & Sanderson's McCall et al 1-A	20	535
K D Oil Co.'s W. P. Ferguson 3	125	1600
W. P. Ferguson 4	125	1600
Kentucky Oil Assn's Taylor 3-A	100	1606
B. J. Shaw et al's W. P. Ferguson 2	100	1588
K. & Kempner 1-B	10	1590
J. I. Staley's K. & Kempner 8	75	1590
Texhoma Oil & Ref. Co.'s S. M. Gose 36	120	1593
S. M. Gose 37	120	1586
White Oil Corp.'s K. & Kempner 2	*	2020

BURKBURNETT COMPLETIONS

American Refining Co.'s C. E Jarrell 1	*	1885
Barkley & Meadows & Sun Co.'s J. Hirschi 1	250	1885
Magnolia Petroleum Co.'s C. C. Embry 2-DD	*	2142
C. C. Wood et al's J. H. Holly 1	*	1950

Sensation Belting



For DRILLING PUMPING and POWER TRANSMISSION SERVICE

Mfg. only by

VOORHEES RUBBER MFG. CO.

Jersey City, N. J.

$2,222,866.22

In CASH Dividends

Have been returned to Policy-holders of the Texas Employers Insurance Association since its organization.

While making this great saving in workmen's compensation insurance cost, these subscribers were enjoying ABSOLUTE Security and REAL Service.

If you would share in this Security, Service and Savings get in touch with us at any of our offices in the following cities:

Dallas, San Antonio, Breckenridge, Houston, Beaumont, Mexia, Ft. Worth, Wichita Falls, El Paso

Texas Employers Insurance Association

Many New Locations Would Test Out Country Around New Corsicana Well

Mexia, Texas, Jan. 16.—Fully a half dozen tests will be started immediately in the vicinity of the Corsicana Deep Well Company's producer on the J. O. Burke farm, which was reported last week showing an initial production of 350 barrels at 2961 feet and definitely establishing a deep producing horizon in the old Corsicana shallow field. Leases within a radius of a mile or two of the well were in big demand during the past week, and many deals were closed at prices ranging as high as $1,000 per acre for close in acreage. The major companies are taking an active interest in the new pool, and have announced that drilling will begin at once.

The Burke well is located about eight miles east of Corsicana and less than one mile south of Powell in the midst of shallow wells that have been producing for years from sands above the 1,000-foot level. The nearest deep production is at Richland fully 15 miles to the south. The owners of the discovery well had made two previous attempts to drill for deep pay, resulting in both holes being lost. The third test that netted them production also encountered numerous mishaps, and fully a year was spent in putting the hole down to the 2960 foot level, where the pay sand was picked up and drilled in about 18 inches. The well began flowing by heads, and the oil tests about 28 gravity. The production has since settled to about 300 barrels daily with both salt-water and b. s. showing in small quantities. It is believed that the casing was not seated properly, and that the basic sediment and water is coming from above the pay sand. Temporary storage has been erected at the well, and it is planned to sell the production to an independently owned refinery at Corsicana. The owners have made no effort to drill the well deeper into the pay.

Cosden & Company

HIGH GRADE

PETROLEUM PRODUCTS

TULSA, OKLAHOMA

Petroleum and Its Products

High-Grade—Uniform Quality

Gasoline, Kerosene, Fuel Oil, Naphtha, Distillates

Sunshine State Oil & Refining Co.

(Incorporated)

Offices, 1019-1025 American National Bank Bldg. Wichita Falls, Texas

MEXIA DISTRICT PRODUCTION

Mexia, Texas, Jan. 16.—The daily average production for the Mexia district for the past week was divided about as follows:

	Barrels
Humphreys	23,965
Gulf Production Co.	4,200
Humble Oil & Ref. Co.	3,510
Magnolia Petroleum Co.	3,660
Simms Oil Co.	3,280
Western Oil Fields Corp.	3,670
J. K. Hughes	2,610
Atlantic Oil Co.	2,465
H. J. Parker	2,210
Danciger Oil Co.	1,065
Kirby-Monarch	700
Kirby Petroleum Co.	340
The Texas Co.	440
Houston Oil Co.	330
Sun Company	445
Miscellaneous	2,500
Total	55,410
Last Week	56,100

Currie

Humphreys Oil Co.	1,815
Snowden & McSweeney	890
Brothers Oil Co.	730
Newblock Oil Co.	805
Homaokla Oil Co.	600
Cosden Oil & Gas Co.	375
Trapshooters Oil Co.	340
J. K. Hughes	185
Gulf Prod. Co.	90
The Texas Co.	25
Total	5,865
Last Week	6,106

Richland

Sun Co.	220
Panhandle Oil & Ref. Co.	15
Total	235
Last week	320
Total Mexia District	61,510
Total last week	62,580

MEXIA COMPLETIONS

Company, well, location	Initial Production Bbls.	Depth
Humphreys Oil Co.'s Berthelson 8	45	3100
Berthelson 11	60	3100
Berthelson 12	50	3100

"Workovers" at Goose Creek Furnish Only Good Wells in Gulf Coast Fields

Houston, Texas, Jan. 16.—There were only seven completions in the Texas Gulf Coast fields during the past week, five of which were producers with a total initial production of 2020 barrels, while the total average daily production for the week was 114,985 barrels against 114,590 barrels the previous week, showing a slight increase.

The Turnbow Oil Company's Schilling 9, a work over, at Goose Creek, which came in making 1600 barrels of pipe line oil at 4500 feet, was the best completion of the week. The Gulf Production Company also completed its Wright 16 in this field for 100 barrels at 2400 feet. This well was a workover. Humble Oil and Refining Company's Gaillard 9, a workover, came in blowing dry gas and spraying some oil at 2360 feet. This company has a show in its Schilling 17, a workover, at 2490 feet and Smith 2 at 2200 feet and both wells are being tested.

At Barbers Hills S. J. Hindman's Collier 1 is flowing 25 barrels of 22 gravity oil from the shallow depth of 800 feet. This well will be placed on the beam. The United Petroleum Company is resetting the screen in its Richardson 8 which was put on the pump last week at 2238 feet. The Barrow 2 of The Texas Company, completed for 1200 barrels at 3038 feet, stopped flowing and is now being drilled deeper. The Humble Oil & Refining Company's B. & F. 1 tested dry at 3160 feet and screen is being drilled out to deepen.

The Sinclair Oil & Gas Company's Becker 5, at Damon Mound, has 1000 feet of 22 gravity oil standing in the hole at 2924 feet and is now being placed on the beam. This company's N. T. Masterson 3 tested salt water at 2120 feet and is drilling deeper. Hyde Production Company has a show in its Kittrel 2 at 2997 feet and 6-inch casing is being set. The Southern Petroleum Company has placed its Bryan 5 on the pump and it is doing around 400 barrels, but an actual gauge has not been obtained.

The Amerada Petroleum Corporation is running 2½-inch tubing in its States 3-B at Orange trying to make it flow. The total depth of the hole is 3900 feet and oil is standing within 300 feet of the top. This company is resetting the screen in its McMadden 1, at Spindle Top, for another test in the same sand.

A new location has been made at Stratton Ridge by the Freeport Sulphur Company on its Dannenbaum-Tolar 11, near the Dannenbaum-Tolar 9, which proved the field last spring.

The Humble Oil & Refining Company has abandoned its Fitzsimmons 4, at Pierce Junction, which came in last week making gas at 3900 feet.

The Oil Production Company's Ahlers 1, completed at Big Creek in Fort Bend, last week for 200 barrels of pipe line oil, 21.5 gravity, had declined early this week and will probably be put on the beam. The sand in this well was encountered at 1654 feet.

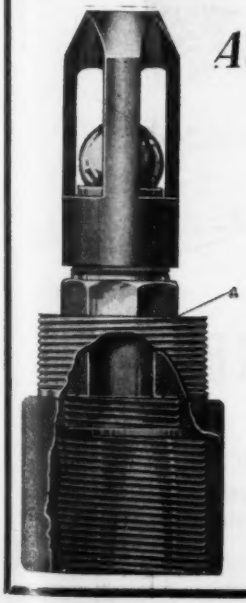
TEXAS GULF COAST COMPLETIONS

Hull—			
Houston Production Co. Abel 4		50	2480
Yount Lee Oil Co. Riviere 1		*	2640
West Columbia—			
Gulf Prod. Co. Egres 2, wo		70	3050
Goose Creek—			
Gulf Prod. Co. Wright 16, wo		100	2400
Turnbow Oil Co. Schilling 9		1600	4500
Pierce Junction—			
Humble Oil & Ref. Co. Fitzsimmons 4, wo		*	3900
Rockdale-Minerva—			
Owens Petroleum Co., Henry 13		5	706
Hefly, McIntosh & Thomas Henry 7		3	700
Fritz Fuchs Henry 3		10	690
Big Creek—			
The Oil Production Co. Ahlers 1	200		1654

MISCELLANEOUS TEXAS GULF COAST PRODUCTION

Houston, Texas Jan. 16.—The average daily production of the Miscellaneous Gulf Coast fields for the past week was distributed about as follows:

	Past Week	Prev. Week
Mirando	5,000	3,750
Sour Lake	4,850	4,700
Somerset	4,000	4,000
Saratoga	1,830	1,715
Batson	1,135	1,000
Barbers Hill	400	1,000
Blue Ridge	925	1,000
Spindle Top	845	780
Rockdale	600	600
Markham	110	110
Nacogdoches	100	100
Dayton	65	65
Richmond	25	15



Adams Combination Cuff and Standing Valve

Patent No. 1353303

Not necessary to use special cuff on working barrel—simply take a top cuff off of any old barrel and substitute for bottom cuff, then screw hydraulic valve in place.

Made of bronze with steel crown ball and seat.

Has a salvage value

Sizes 1¼, 2¼, 2¾, 3¾ inches

Manufactured only by

Southern Brass Mfg. Co.

HOUSTON, U. S. A

SOMERSET COMPLETIONS

Company, Well, Location	Initial Production Bbls.	Depth
Grayburg Oil Co. Muennink 12	5	....
G. W. Carruthers 17	8	....
Hartung B-9	5	....
Texas Southern Oil & Dev. Co. Avant 9	10	....
Ed Leach No. 1	4	....

MIRANDO COMPLETIONS

Webb County—		
Dixie Oil Co. Brackenridge 4	30	....
Russell-Johnson Coffield 2	100	....
Magnolia Pet. Co. Garcia 4	1200	....

A. T. (Jack) Smith, former manager of the Tulsa office of the Acme Petroleum Company, has assumed his new duties as manager of the Colorado territory for the Mutual Oil Company, with headquarters in Denver.

Some Facts About Electric Dehydrators

100 Units in Operation in South Texas Fields.

1,500,000 Barrels Emulsion Treated Monthly in South Texas Fields.

50 Units Installed in South Texas Fields During 1922.

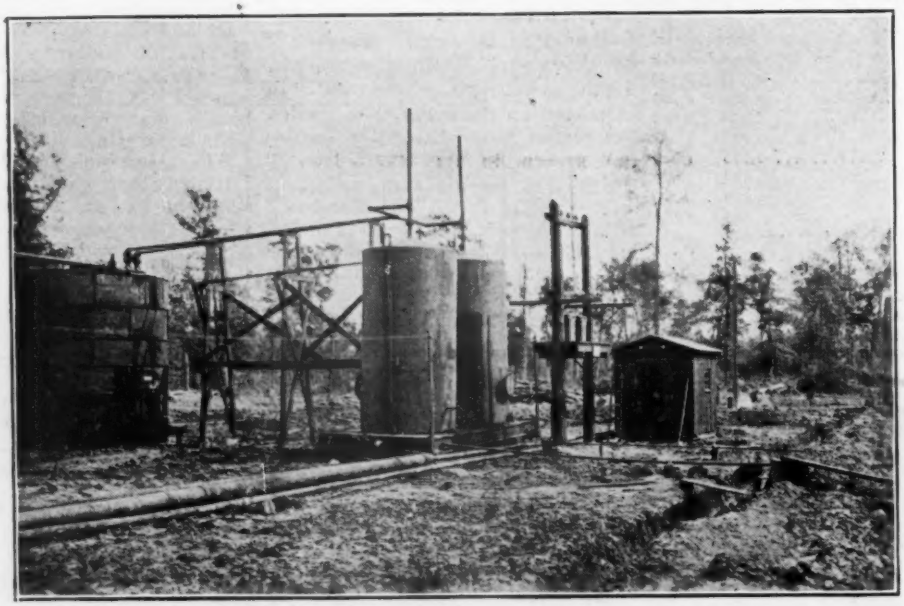
More Oil Is Being Treated Electrically in South Texas Fields than with Any Other Process.

Average Cost for Electricity per Unit per Twenty-Four Hours Operation Is $1.50.

Average Total Installed Cost per Unit Is $3000.00.

Average Cost per Barrel of Oil Treated in South Texas Fields 2 Cents.

Do It Electrically During 1923



Two-Unit Electric Dehydrator

PETROLEUM RECTIFYING COMPANY
OF CALIFORNIA

MAIN OFFICE
260 California Street,
San Francisco, California

BRANCH OFFICES
216 Higgins Bldg., Los Angeles, California
336 Humble Bldg., Houston, Texas

Say you saw it in The Oil Weekly

Seven New Wells Are Added to Somerset Field During the Week

Somerset, Texas, Jan. 15.—Seven new wells were added to the Somerset field last week. The Texas Southern Oil and Development Company's No. 9 Avent probably was the best of the seven completions coming in with a head and going on pump for better than the average.

Other completions, all reporting average production, were: Ohio-Somerset Company's No. 9 Avent, Ed Leach et al's No. 1 Wren Carruthers, Grayburg Oil Company's No. 12 Muennink, No. 9 Hartung B, 10 Hartung A and 17 G. W. Carruthers.

Eight wells are reported drilling and nearly a dozen are cemented and will drill in within 10 days.

The Empire Gas and Fuel Company is extending its holdings, having bought several leases recently, the latest being the Stanfield lease. It is reported also to have contracted with Carl Brothers for several wells on this new property, the first of which has already spudded in, Carl Brothers having bought one of the Ed Leach rigs and moved it onto the lease. These contractors are drilling the Empire's No. 9 Ernst, which was cemented this week.

The Empire recently bought a part of the Dobrowolski lease from Perrenot, Duffy and Delavan.

HUMBLE PRODUCTION

Houston, Texas, Jan. 16.—The average daily production of the Humble field for the past week was about as follows:

	Barrels
The Texas Co.	4,790
Galena Signal Oil Co.	1,000
Invincible Oil Co.	200
Czeaux & Martin	155
Humble Oil & Refining Co.	90
Burley Oil Co.	85
Crown Oil & Refining Co.	80
Southern Petroleum Co.	25
Trinity Petroleum Co.	50
Bradley Bros.	25
Gulf Coast Oil Corp.	20
Miscellaneous	830
Total	7,350
Last Week	7,970

WEST COLUMBIA PRODUCTION

Houston, Texas, Jan. 16.—The daily average production of the West Columbia field for the past week was distributed about as follows:

The Texas Co.	15,780
Humble Oil & Refining Co.	5,400
Gulf Prod. Co.	1,000
Hyde Production Co.	600
The Sun Co.	510
Crown Oil & Refining Co.	100
Southern Petroleum Co.	80
Monarch & Stribbling	65
United Development and Drilling Co.	50
Total	23,585
Last Week	22,660

GOOSE CREEK PRODUCTION

Houston, Texas, Jan. 16.—The average daily production of the Goose Creek field for the past week was divided about as follows:

Gulf Production Co.	10,400
Humble Oil & Refining Co.	8,750
Gulf Coast Oil Co.	750
The Sun Co.	375
Butler Perryman	350
Turnbow Oil Co.	300
Crown Oil & Refining Co.	160
C. B. Japhet Oil Co.	100
Miscellaneous	145
Total	21,305
Last Week	20,975

ORANGE PRODUCTION

Houston, Texas, Jan. 16.—The average daily production of the Orange field for the past week was about as follows:

	Barrels
Gulf Production Co.	3,300
Humble Oil & Refining Co.	2,275
Brownie-Babbette Oil Co.	1,600
Amerada Oil Corp.	1,600
Hamilton Oil Corp.	1,000
Orange Pet. Co.	855
Edgerly Petroleum Co.	800
Monarch Oil & Refining Co.	550
Supreme Oil Co.	400
Atlantic Oil Co.	265
Sinclair Oil & Gas Co.	250
Sun Company	200
Gulf Coast Oil Co.	130
Paraffin Oil Co.	60
Miscellaneous	70
Total	13,355
Last Week	13,385

HULL PRODUCTION

Houston, Texas, Jan. 16.—The average daily production of the Hull field for the past week was distributed about as follows:

Mount Lee Oil Co.	16,600
Gulf Production Co.	5,100
Republic Production Co.	5,000
Monarch Oil & Refining Co.	2,900
Houston Production Co.	2,620
Humble Oil & Refining Co.	1,800
Higgins Oil & Fuel Co.	600
Empire Gas & Fuel Co.	500
F. H. Carpenter, Trustee	155
The Texas Co., royalty	155
Crown Oil & Refining Co.	5
Miscellaneous	275
Total	35,690
Last Week	36,275

DAMON MOUND PRODUCTION

Houston, Texas, Jan. 16.—The daily average production of the Damon Mound field for the past week was about as follows:

Sinclair Oil & Gas Co.	1,950
Hyde Production Co.	300
Southern Petroleum Co.	250
Humble Oil & Refining Co.	150
Total	2,650
Last Week	3,000

HEY dey diddle,

• • •

IT ain't no riddle, a

• • •

GULFCO Crown Block

• • •

IS the best. It makes

• • •

A MAN cuss and raises

• • •

A FUSS, to hold up the

• • •

WORK on a test. If

• • •

YOU never heard tell,

• • •

THAT in drilling a well,

• • •

A CROWNBLOCK

• • •

WE build in our shop

• • •

SAVES you labor and

• • •

TIME, when you finish

• • •

THIS rhyme, write us,

• • •

WE'LL tell you,

• • •

OLD Top.

Gulf Coast Machine and Supply Co.

BEAUMONT, TEXAS

PIERCE JUNCTION PRODUCTION

Houston, Texas, Jan. 16.—The average daily production of the Pierce Junction field for the past week was about as follows:

	Barrels
Gulf Production Co.	465
Humble Oil & Refining Co.	200
Snowden & McSweeney	65
Sun Co.	5
Total	735

Magnolia's No. 4 in Schott Pool Producing About 1200 Barrels

Mirando City, Texas, Jan. 5.—The chief feature of the week in this district is the new Magnolia Petroleum Company's well in the Schott pool, which has increased production to about 1200 barrels a day. This is the No. 4 in the northwest corner of Block II, Los Ojuelos grant, completed a week ago when it came in making heads for about 600 barrels but by skillful handling was increased to above 1000 barrels. Saturday it was gauged for a steady flow of 1200 barrels. This is the best well in Mirando territory since last August, when the Kanoka No. 3 was completed for above 2000 barrels. The Magnolia has drilled four wells in the Schott pool, all producers, and has spudded in on their No. 5.

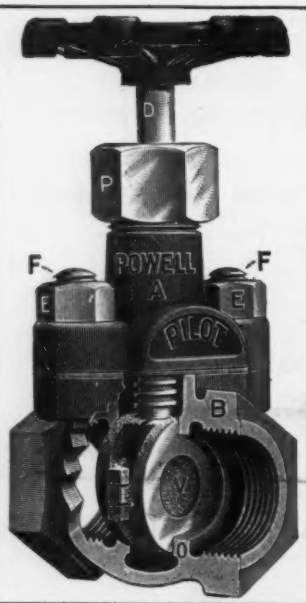
Two other wells for the week were the McRee Petroleum Company's No. 5, upper end of survey 253, which is estimated good for 300 barrels. Russell and Johnson et al's No. 3, lower end of survey 771, also is making around 300 barrels. These three wells are within one-half a mile of Mirando City, which has doubled in population in three months. Practically all available hotel room in Laredo is occupied, the hotel here is filled and oil men are coming in steadily, so that it looks like a busy season for the Webb-Zapata territory this winter.

The Mirando Development Company is being organized among local citizens to build a two-story hotel here. The building will be 50 x 153 feet and will cost $35,000, according to plans announced here.

The Magnolia Petroleum Company announced recently that a third 55,000 barrel storage tank would be built on survey 2151, a mile north of Mirando City. This company is now storing its production and oil is being run into the first of these big tanks completed in December.

A test is to be put down on the same section as Oilton. The Magnolia, the Laredo Oil Company, Hughes and the Marathon Companies will join in a test on survey 786, the same section as the little town is located on. This is regarded as one of the most important tests of the new year.

Henry A. Leake, formely with the Carter Oil Company at Wilson, Oklahoma, sailed from New York January 13 for Buenos Aires, from where he will go inland 700 miles to where the Standard Oil Company of Argentina is drilling for oil in the South American republic. He was accompanied by his wife and will remain three years.



POWELL "PILOT" GATE VALVES

Iron Body with Steam Bronze Trimmings, or All Iron

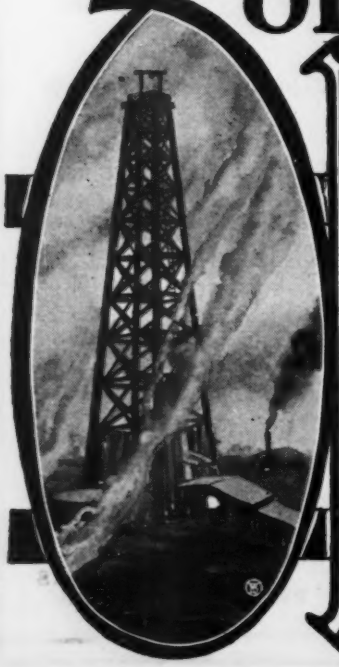
Simple in construction, having two brass discs with ball and socket back, insuring tight closing and easy opening.

Economical and reliable, discs can be taken out and refaced whenever necessary, making the valve almost everlasting.

Ask your dealer for Powell "Pilot" Gate Valve or write us.

THE WM POWELL CO.
DEPENDABLE ENGINEERING SPECIALTIES
CINCINNATI, O.

EVERYTHING for the OIL WELL



Operators in the oil fields in this territory have found that the many facilities we maintain assure them at all times

A Dependable Source of Supply

Peden supplies have had a large part in the development of the oil fields of Texas. With our years of experience in meeting the requirements of these fields we are in a position to serve best. Send us your orders or write today for prices and information.

"We Ship Quick"

"The Largest Supply House in the Southwest"

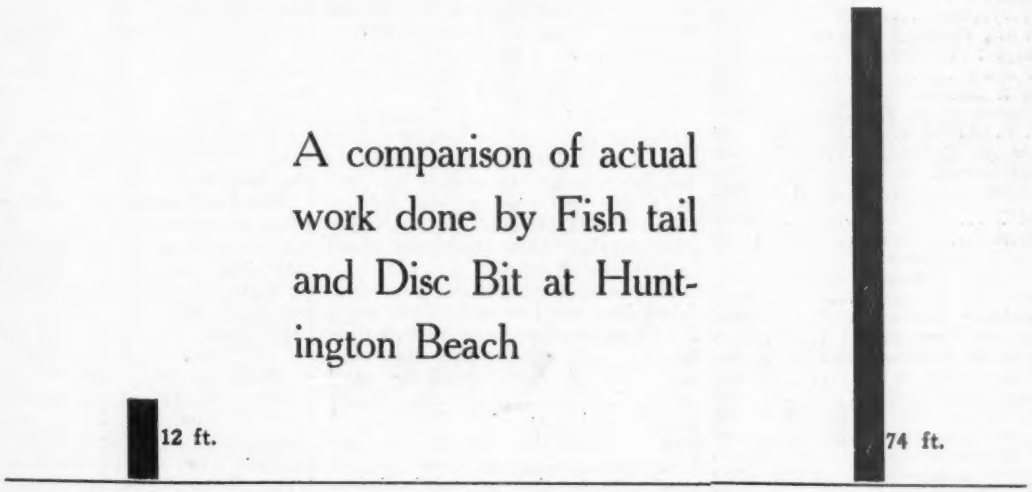
PEDEN IRON & STEEL CO.
HOUSTON SAN ANTONIO
FT. WORTH SHREVEPORT

ROTARY DISC BIT

"THE BIT THAT MAKES HOLE"

Simplest
Most Efficient

A comparison of actual work done by Fish tail and Disc Bit at Huntington Beach



One of the largest oil companies drilling in Santa Fe Springs last week made 900 feet of 20 inch hole in 24 hours.

Caribou Oil Company, in Midway Field, last month made 267 feet with one set of discs—Running 24 hours without change. Figure what a saving that means.

ROTARY DISC BIT COMPANY

Telephone 824-808

2176 EAST NINTH, LOS ANGELES

CHERRY, NEAR PECK, LONG BEACH

Say you saw it in The Oil Weekly

LOUISIANA PRODUCTION

Shreveport, La., Jan. 15.—The average daily production for the Louisiana fields for the last week was divided approximately as follows:

Haynesville

	Barrels
Ohio Oil Company	18,575
Louisiana Oil Refining Corp.	4,875
Gilliland Oil Company	4,850
Standard Oil Company	1,310
Smitherman-McDonald	1,285
Roxana Petroleum Corp.	1,185
Gulf Refining Co.	1,025
Humble Oil & Ref. Co.	625
Amerada Petroleum Corp.	600
Palmer Trust Co.	535
Simms Oil Company	515
Fortuna Oil Company	350
Ziegen et al	285
Belchic & Laskey	250
Transcontinental Oil Co.	250
W. H. C. Oil Co.	250
Houston Oil Company	240
National Refining Co.	275
Miscellaneous	1,630
Total	38,910
Last week	41,185

Homer

Standard Oil Company	3,450
Gulf Refining Company	1,890
Gilliland Oil Company	1,875
Louisiana Oil Refining Corp.	900
The Texas Company	625
Arkansas Natural Gas Co.	535
United Oklahoma Oil & Gas Corp.	495
White Oil Corporation	485
Simms Oil Company	450
Sinclair Oil Company	250
Miscellaneous	660
Total	11,615
Last week	11,700

Caddo

Gulf Refining Company	2,650
Standard Oil Company	1,955
The Texas Company	1,700
Dixie Oil Company	1,605
Fortuna Oil Company	350
Louisiana Oil & Refining Corp.	245
Caddo Central Oil & Ref. Corp.	205
White Oil Corp.	50
Miscellaneous	2,025
Total	10,845
Last week	10,875

Bull Bayou

Gulf Refining Company	1,620
Fortuna Oil Co.	975
The Texas Company	870
Continental Asphalt Company	600
Standard Oil Company	160
Sinclair Oil Corporation	75
Simms Oil Company	20
Miscellaneous	1,780
Total	6,100
Last week	6,110

Elm Grove

Elm Grove	1,260

Webster Parish Wildcat Makes Dry Gas; Largest Well Yet Completed

Shreveport, La., Jan. 15.—Smitherman & McDonald's Waller well in section 28-23-11, Webster Parish, the test of which has been delayed for two weeks or more, was bailed in last Saturday, and, although it is one of the biggest gas wells ever completed in Webster Parish, being conservatively estimated as good for 35,000,000 cubic feet of gas per day, its result is of a disappointing nature to operators in that district, who, because it is located in a hitherto undrilled territory, being two miles northwest of the Harris well, and because it appeared to have encountered the respective formations at favorable levels, had entertained hopes that it would reveal the long-sought oil reservoir. It is producing dry gas only from nine feet of sand at a total depth of 2690 feet.

The Daniel Boone Syndicate's Wheeler gas well in section 35-23-11, of the Sarepta community in Bossier Parish, continues to produce dry gas only at the rate of about 25,000,000 cubic feet per day after having been deepened three feet in search of oil.

Haynesville operators, ever confident that the future holds in store for them another boom which they believe will follow the discovery and test of the Woodbine sand under that structure, were greatly encouraged last week by reports that a good showing of gas had been obtained from four feet of sand at a total depth of 3450 feet in the Gilliland Oil Company's Waller deep test in section 11-23-8, Claiborne Parish. The successful completion of a test of this newly-found sand was for a time rendered doubtful because of a difficult fishing job, which however has now been overcome. The hole is being reamed today to make it possible to set and cement a string of five and three-sixteenths inch casing.

The Hampton wildcat, located in section 13-20-8, of Claiborne Parish, three and a half miles south of the Homer field, tested only salt water when bailed last week at a depth of 1440 feet, where eight feet of sand is reported to have been found. This well is owned by Zeigen and others.

The people of Vivian and the northwestern portion of Caddo Parish, who since the completion in October of a small producer by the Louisiana-Texas Community Oil Company have been entertaining high hopes of an oil boom are now beginning to feel themselves slipping, as Bill Rowe's Kendrick well, which is being drilled near the "discovery" well, is now down more than 100 feet below the horizon which paid off in the latter, without having encountered any particularly encouraging indications. Rowe's well, which is located in the northwest corner of section 33-23-16, is now approaching the 3000 foot level.

The Gulf Refining Company has plugged and abandoned its Hodges No. 11, a deep test located in section 24-16-12 of the Elm Grove field in Bossier Parish, which recently attracted attention by yielding a good show of very high gravity oil along with salt water from a depth of 4424 feet. The Gulf Company's Hodges 13, on the same lease, is reported as having been completed last week as a 90 barrel pumper from a total depth of 1542 feet. The Atlas Oil Company's Caplis 8, located in section 23 of the same township, is reported as a 50 barrel pumper from the same level.

BELLEVUE PRODUCTION

Shreveport, La., Jan. 15.—The average daily production for the Bellevue field for the past week was approximately as follows:

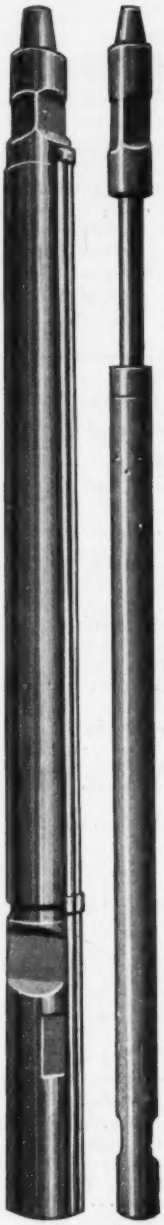
	Barrels
Gulf Refining Company	1,615
R. L. Autrey	800
Standard Oil Company	720
Humble Oil & Refining Co.	615
Louisiana Oil Refining Corp.	475
R. O. Roy & Company	400
Chandler & Collins	50
Total	4,675
Last week	4,790

Louisiana-Arkansas Oil Men to Have Association

Shreveport, La., Jan. 18.—A separate division of the Mid-Continent Oil & Gas Association to be known as the Louisiana-Arkansas division of the Mid-Continent Oil & Gas Association, will be formed here tomorrow evening when Louisiana and Arkansas oil men will meet at the Youree Hotel.

Heretofore oil men in Louisiana and Arkansas have been joined with those from Texas in what was known as the Texas-Louisiana and Arkansas Division. Due to the fact that many of the problems of Texas were peculiarly Texas problems, and that many of the problems in Louisiana and Arkansas did not affect their fellow members in Texas, the Arkansas and Louisiana people decided to form a division of their own.

Helrazer Electro Magnet Fishing Tool



The Helrazer is the only completely successful magnet that has ever been developed for fishing loose objects out of drilling wells.

This tool is especially effective for lifting out small pieces such as underreamer lugs, socket slips, broken pieces, etc., and it is performing successfully in many fields.

The Wash Down Pump when used with Helrazer makes it possible to clean the face of magnet and wash mud or sediment from objects fished for in muddy holes.

Write for new illustrated booklet.

Manufactured by

The Deep Well Engineering Co.

513-14 Second Nat. Bk. Bldg.
Toledo, Ohio,

SOUTH LOUISIANA COMPLETIONS

Company, Well, Location	Initial Production bbls.	Depth
Vinton—		
Vinton Pet. Co.'s Gray 36	200	2330
Edgerly—		
Texla Pet. Co.'s Hunter 1	125	3055

SOUTH LOUISIANA PRODUCTION

Lake Charles, La., Jan. 16.—The average daily production of the South Louisiana fields for the past week was divided about as follows:

	Past Week	Prev. Week
Vinton	5,360	5,540
Evangeline	470	475
Edgerly	725	750
Anse La Butte	80	85

NORTH LOUISIANA COMPLETIONS

Company, Well, Location	Initial Production Bbls.	Depth
Caddo Parish—		
La. Oil Ref. Corp.'s Lane A-7, 22-21-15	75	1563
Elm Grove Field—		
Atlas Oil Co.'s Caplis 8, 23-16-12	50	1547
Gulf Refining Co.'s:		
Hodges 11, 24-16-12	*	4424
Hodges 13, 24-16-12	90	1542
Sarepta District—		
Dan Boone Synd. Wheeler 1, 35-23-11	¶25	2685
S. S. Raymond Houston 1, 33-23-10	¶30	2660
Total, 2 wells	¶75	

ARKANSAS COMPLETIONS

El Dorado Field—		
E. L. Coleman:		
Pendleton 2, 21-18-15	*	2142
Pendleton 3, 21-18-15	*	2169
Pendleton 6, 21-18-15	100	2121
H. C. Cotton Cates 1, 33-18-15	*	2205
Cates 2, 33-18-15	*	2176
Dauche et al Tuffts 3, 31-16-14	*	2525
Enfisco Oil Co. Greenwood 1, 5-19-15	*	2190
Falvey et al Grace 1, 32-17-15	*	2232
Imperial Oil Co. Moody 1, 17-17-14	200	2190
Montgomery et al Rogers 1, 10-19-15	*	2182
Morris Drilling Co. Robinson 1, 32-18-14	*	2347
McDuff & Greenood Newson 6, 5-18-15	*	2129
McLaughlin Oil Co. Stowe 1, 5-17-13	*	2960
McMurry Drilling Co. Burton 1, 28-18-15	*	2147
J. L. Nelson Allen 1, 18-17-14	200	2151
D. C. Richardson Murphy B-2, 20-17-14	125	2219
Wenkle et al Pendleton 1, 20-18-15	*	2185
Total, 17 wells	625	
El Dorado Deep—		
Woodley et al Townsend 1, 6-18-14	*	3081
Stephen Field—		
Ohio Oil Co. Tidwell 1, 20-15-19	20	2095

STANDARD

Seamless Upset Rotary Drill Pipe

In Stock at Warehouses of

REPUBLIC SUPPLY CO.
CONTINENTAL SUPPLY CO.
FRICK-REID SUPPLY CO.

California:

ASSOCIATED SUPPLY CO.
REPUBLIC SUPPLY CO.

Standard Seamless Tube Co.

Pittsburgh, Pa.

ARKANSAS PRODUCTION

El Dorado, Ark., Jan. 15.—The average daily production from the Arkansas fields for the last week was divided approximately as follows:

El Dorado

	Barrels
Gulf Refining Company	1,310
Standard Oil Co.	1,275
Arkansas Natural Gas Co.	920
El Dorado Nat. Gas. & Pet. Co.	740
Constantine Refining Co.	590
Phillips Petroleum Co.	535
Morgan Oil Co.	510
Humble Oil & Ref. Co.	525
Woodley Interests	500
Magnolia Petroleum Co.	480
Sun Company	420
Hudson Oil Company	370
Enfisco Oil Company	350
Gladys Belle Oil Co.	365
Arkansas Invincible Oil Corp.	270
F. C. Henderson	305
White Oil Corporation	300
Associated Prod. & Ref. Corp.	270
Johnson Drilling Co.	265
Amerada Pet. Corp.	260
Wichita Pet. Corp.	245
Clark & Greer	230
Harrell & Harcher	230
Pure Oil Company	225
Skelly Oil Company	210
Caddo Central Oil &Ref. Co.	200
Miscellaneous	7,385
Total	19,335
Last week	19,785

Smackover District

	Barrels
Houston Oil Company	9,000
Gulf Refining Company	8,000
Simms Oil Company	6,000
Imperial Oil & Gas Co.	4,750
Roxana Petroleum Corp.	5,750
Forrest Oil Co.	5,550
Empire Gas & Fuel Co.	5,500
North American Oil Co.	5,000
The Texas Co.	4,200
Standard Oil Co.	4,100
Edmonds Oil Synd.	4,000
Sinclair Oil Co.	3,000
Ramage, A. H.	3,000
Humble Oil & Refining Co.	2,500
Bradstreet Oil Co.	2,725
Pure Oil Co.	2,600
Gladys Belle Oil Co.	2,550
V. K. F. Drilling Co.	2,400
Morris et al.	1,750
Arkansas Natural Gas Co.	1,000
Jones, E. M.	1,000
The Sun Co.	1,000
T. & P. Coal & Oil Co.	1,000
Workman & Jackson	720
Woodley Petroleum Co.	500
Bailey Murray Oil Co.	500
Miscellaneous	3,000
Total	91,095
Last Week	94,925

Smackover Light Oil Area Is Extended by 15,000 Barrel Well

Shreveport, La., Jan. 17.—Murphy 1, drilled by Broderick & Calvert in the northwest corner of the southwest quarter of section 10-16-16, Union County, came in yesterday with an initial production estimated at from 12,000 to 15,000 barrels of 31 gravity oil from 15 feet of sand at a total depth of 2090 feet.

This completion extends the proven light oil area three quarters of a mile west of Cargiles' Saxon well, and is located a mile and a quarter southeast of Clark & Melath's light oil well in the southwest 40 acres of section 4 of the same township.

El Dorado, Jan. 15.—The roads in the Smackover Field have gotten so bad that mules, which long ago supplanted motor trucks, are now in turn being displaced by oxen, long teams of which literally drag their loads through the bottomless mire.

It is encouraging to note that the accompanying completions report shows a considerable decline in new production, which is explained by the fact that the average initial production of current completions shows a sharp decline in comparison with those of two or three weeks ago.

The most important and, if speaking from the view-point of the producers as a whole as contrasted with that of individuals or companies directly affected, at the same time the most welcome news of the week from the Smackover Field is found in the reports of failures on the northeast, northwest, and southwest sides of the proven area. But, in spite of these failures, and of the decline in new production, the field's average production was increased last week by another 3000 barrels.

On the northwest, Thompson and others have abandoned their Long 1, located in the southeast quarter of section 28-15-15, Ouachita County, which was drilled to a depth of 2,750 feet, but which yielded only salt water from both sands penetrated.

On the northwestern edge of the field, the Houston Oil Company's Cunningham 2, located in the southwest corner of the northwest quarter of the southeast quarter of section 25-15-16, Ouachita County, tested salt water from forty feet of sand formation at a total depth of 2,061 feet. This well will be plugged back in an effort to exclude the water.

El Dorado East Field-Calion

	Barrels
Detroit Summerfield Oil Co.	715
Sam Richardson	670
Richmond Oil Company	425
Carolina Oil Company	340
Zoder et al	230
Franks et al	225
Ozark Oil Company	210
Jarmon Drilling Company	200
Terry Summerfield Oil Co.	175
Miscellaneous	290
Total	3,480
Last week	3,365

Stephens District

Stephens District	350
Total El Dorado District	23,165

ARKANSAS COMPLETIONS

Company, Well, Location	Initial Production Bbls.	Depth
Smackover Field—Ouachita County—		
Bradstreet Oil Co. Laney 1, 36-15-16	300	2000
Laney 2, 36-15-16	300	2017
Duho Oil Co. McKenzie 5, 35-15-16	400	2022
McKenzie 8, 35-15-16	100	2025
Empire Gas & Fuel Co. F. A. and B. T. Laney 2, 31-15-15	200	2015
F. A. & B. T. Laney 4, 31-15-15	3000	2010
Linahan 1, 36-15-16	¶5-20	2020
Humble O. & R. Co. H. Laney 2, 31-15-15	2500	2025
F. A. & B. T. Laney 2, 32-15-15	¶20-25	2025
Simms Oil Co.:		
Hirsch 2, 31-15-15	250	2055
Laney B-2, 31-15-15	100	2017
F. A. Laney 4, 31-15-15	125	2045
McKenzie 1, 36-15-16	40	2020
Sinclair Oil Co. Linahan B-1, 36-15-16	¶10-400	1998
Standard Oil Co.:		
Bennett A-1, 32-15-15	¶15-500	1983
A. Forch 2, 29-15-15	3000	2040
S. & E. Umstead B-1, 32-15-15	¶40-2	2032
Smackover Field—Union County—		
Humble O. & R. Co. Flenniken 1, 6-16-15	5000	2005
Arkansas Nat. Gas Co. Spaha 1, 35-15-16	¶15	2020
Gulf Ref. Co. Primm 1, 1-16-16	¶30-20	2000
Harris Drilling Co. McElroy 1, 4-16-16	¶1	2093
Houston Oil Co. Primm 3, 1-16-16	¶3-100	2027
Marr et al Primm 2, 2-16-16	¶1	1999
Riley et al Primm 1, 1-16-16	¶15	1991
Thompson et al Long 1, 29-16-15	*	2750
Total, 25 wells	¶155-16,382	

To Earn More— Learn More

GEOLOGY OF PETROLEUM

By William Harvey Emmons

A Discussion of the origin, occurence, accumulation and distribution of oil and gas. The book presents the salient facts relating to the geology of the world's principal oil fields with reference to literature that describes them in details. It offers a perspective of the geology of Petroleum.

610 pages, 6x9, 254 maps and illustrations. $6.00 net, postpaid.

FIELD METHODS IN PETROLEUM GEOLOGY

Cox, Drake and Mullenburg

The first book on details of field procedure for the petroleum geologist. Instruments and instrument methods in general use are described, the personnel of the field party and questions incidental to field procedure are discussed in detail.

350 pages, pocket size, illustrated, $4.00.

HANDBOOK OF THE PETROLEUM INDUSTRY

David T. Day, Editor-in-Chief

The most comprehensive, most authoritative and most up-to-date work on petroleum ever written. The work of a staff of nineteen foremost petroleum experts, under the editorship of Dr. David T. Day, of the U. S. Bureau of Mines. A work which will appeal to everyone who is in any way interested in the petroleum industry.

Two volumes, 1970 pages, 6x9. Profusely illustrated. Price, $15.00.

Send us your order NOW

The GULF PUBLISHING COMPANY
HOUSTON, TEXAS

Here, then, it is!

As our old friend, Robert Ruxton, says, proof is not a statement of the truth, but proof of the truth of the assertion, Digest that.

Doubtless we have asserted a lot of things about PELCO Bits, and it may be that you relish, now and then, a bit of proof of the truth of our statements.

Here, then, it is, unsolicited, and as unexpected as a bolt from the blue, its author a Lone Star driller and a "man o' parts." Read and believe:

"Have been using your bits and can heartily recommend them as the best fish tails I ever used.

"I have been drilling for twelve years and have used practically every bit made, but give me PELCO for hole."

If you like variety, here's more proof from Arkansas, penned by the scribe for a firm of drillers, dictated, read and signed by the boss, and wholly unsolicited:

"We find your PELCO Bits to give perfect satisfaction and have used no other for the last two years. We have four rigs and receive satisfactory results from your PELCO Bits wherever used."

Names and addresses on suspicion, of PELCO Bits on trial. We'll make good either way—or both.

Good people to do business with

Pelican Well Tool & Supply Co.

General Offices: Shreveport, La.

M. Ind. Rgtrda. PELCO *Reg. U. S. Pat. Office*

Many Completions for Ohio Fields; Extension Is Made to Old District

Lima, O., Jan. 15.—Ohio had a fairly good week of development regardless of the weather conditions, the bulk of the work being done in the central area. The wells completed in Ohio for the week number 55, of which 20 were dry holes, 17 were gas wells with a combined casinghead volume of 17,500,000 cubic feet or an average slightly over a million to the well, and 18 were oil producing wells with an initial production of 470 barrels, or an average per well of close to 26 barrels, being the best average of any of the Eastern fields.

In the Southeastern Ohio fields the only producer of note was drilled by the Pure Oil Company in a test on the Samuel McNaught lease in Muskingum County with a production of 25 barrels. This well is in Jackson township, and a mile and a half east from any production. The oil was found in the deep Clinton formation.

The most interesting well of the week in the Central Ohio area was a 75 barrel producer drilled by the Ed H. Everett Company on the Simpson lease in Licking County, which shows a production of 75 barrels from the deep Clinton formation and in advance of past developments. Another interesting well is that of the Logan Gas and Fuel Company on the Edward Stoner lease in Hanover township, Ashland County, which found a 12 barrel pay in the Clinton deep formation while hunting for gas.

A test well drilled by Romshe & Wright on the Kohler lease in Auglaize County showed a production of 15 barrels and adds much likely looking territory to the old field. Wood County also came to the fore with some fairly good pumpers. W. S. Raydure drilled a 30 barrel producer on the Chapman lease in advance of production, or rather in territory that had been considered no good for many years, and found the oil deep down in the Trenton formation, the well having gone to a depth of 1579 feet to find the pay. In Perrysburg outside the old producing limits John E. Welton drilled a 20 barrel pumper on the Limmer lease, while William Stitt completed a well on the Ovitt lease in Middleton township, good for 15 barrels and Johnson & Speck a 14 barrel pumper on the Speck lease.

SOUTHEASTERN OHIO COMPLETIONS

Company, Well, Location	Initial Production bbls.	Depth
Washington County—		
C. Fickelson & Co., John Smith 1	4	....
Dailey & Co., Bess Noland 1	2	....
Snider & Co., Jacob Close 2	2	....
Henry Cooper, E. H. Warren 1	*	....
John Harland & Co., Earl Haynes 7	*	....
River Gas Co., Whiston Heirs 2	*	....
Charles H. Cisler, McNeal 15	*	....
S. J. Bogard & Co., C. F. Stacey 1	*	....
Brown Heirs, Brown 8	5	....
E. W. Thornily & Co., Heckathorn Heirs 6	*	....
Wiggle & White, Cyrus Beagle 1	*	....
Muskingum County—		
Pure Oil Co., Sam McNanght 1	25	....
Swingle Oil & Gas Co., O. H. Harrop 3	*	....
Monroe County—		
Keener Oil & Gas Co., J. M. Ridgeway 9	2	....
Cyrus McCormick & Co., W. P. Waite 1	¶1½	....
Carroll County—		
A. L. Curry & Co., Tony Miskel 3	5	....
Noble County—		
Charles Robinson & Co., Ed. Lawrence 4	*	....

NORTHWESTERN OHIO COMPLETIONS

Company, well, location	Initial Production bbls.	Depth
Wood County—		
Bushman Bros., Fred Rahe 1	*	1313
Wm. M. Stitt, A. J. Ovitt 9	15	1331
Johnson & Speck, F. H. Speck 2	14	1261
John E. Welton Geo. Limmer 2	20	1290
W. S. Raydure, C. W. Chapman 1	30	1579
Sandusky County—		
Sherman & Hayes, Mary Smith 6	5	1300
May Oil Co., J. Humler 4	8	1399
Darke County—		
Mack P. Colt & Co., C. R Steckleman 1	200	1512
Auglaize County—		
Romshe & Wright, Fred Kohler 1	15	1312
Hancock County—		
Gamboling, Drowney & Co., C. S. Chambers 1	3	1545

CENTRAL OHIO COMPLETIONS

Company, Well, Location	Initial Production bbls.	Depth
Wayne County—		
East Ohio Gas Co., Earl Frontz 1	¶1½	....
Wiley Shelly 1	10	....
Ohio Fuel Supply Co., F. Miller 1	¶½	....
C. L. Sutton 1	*	....
C. Hagerman 1	¶1	....
Burton-Morgan Co., E. M. Brinkerhoff 1	*	....
The Reese Gas Co., Z. T. Reese 1	¶2½	..
Logan Gas & Fuel Co., C. E. Switzer 2	¶1	....
Kline - Eckstein - McCann Co., R. C. Cockrell 1	*	....
Hocking County—		
Arkansas Natural Gas Co., Ohio State Land 1	*	....
Tick Ridge Oil Co., A. L. O'Neill 3	*	....
Ohio Fuel Supply Co., J. C. Stone 2	¶¼	....
Gordon Oil Co., S. E. Lee 2	*	....

GARDNER

Pumps — Governors — Compressors

A special catalog describing our products for the oil fields to you on request.

Built by The Gardner Governor Company, Quincy, Ill.
Sold in the Oil Fields by

THE ATLAS SUPPLY CO. ..... Muskogee and Branches
F. W. HEITMANN CO. ..... Houston, Texas
ALAMO IRON WORKS ..... San Antonio, Texas
HARDWICKE-ETTER CO. ..... Sherman, Texas
PELICAN WELL TOOL & SUPPLY CO. ..... Shreveport, La.
KIRK W. EICHELBERGER ..... San Francisco, Cal.
NORVELL-WILDER HDWE. CO. ..... Mexia, Texas
REPUBLIC SUPPLY CO. ..... Los Angeles, Cal.
HAYWOOD-WILLIAMSON CO. ..... Shreveport, La.
SMITH-BOOTH-USHER CO. ..... Los Angeles, Cal.
RIX COMPRESSED AIR & DRILL CO. .. San Francisco and Los Angeles
HENDRIE & BOLTHOFF MFG. CO. ..... Denver, Colorado

READING

STEEL VALVES

The manufacture of Reading Cast Steel Valves is under continuous and close supervision from the analysis of the raw materials through the inspection and the gauging of the various parts to the test of each finished valve.

Reading Acid Open Hearth Steel is of proven reliability for pressure castings and is particularly free from occluded gases, porosity, shrinkage faults and sand pockets. The process of manufacture permits of close control and the castings meet the requirements of the specifications dictated by heat practice.

To enable the melter to accurately regulate the chemical analysis and hence the physical qualities of the steel, a chemist is on continuous duty to supply immediate analysis of the numerous samples taken from the furnace during the progress of the heat.

READING STEEL CASTING COMPANY, INCORPORATED

BRIDGEPORT, CONNECTICUT

BOSTON · CHARLOTTE · CHICAGO · CLEVELAND · DETROIT · HARTFORD · HOUSTON
NEW YORK · PHILADELPHIA · PITTSBURGH · SAN FRANCISCO

Say you saw it in The Oil Weekly

Increased Field Activity Follows Crude Advance in Eastern Fields

Pittsburgh, Pa., Jan. 15.—Conditions in the oil industry are bettering in the Eastern fields and with the advent of good weather there is no telling the limit the operators will go in their drilling operations, for the year is looked upon as the coming year of developments for oil in this country. The condition of the pipe lines handling crude and reporting same in the fields east of the Mississippi River for the month of December shows a slight increase in production handled from the wells and much larger increase in deliveries, and a heavy falling off in stocks, which is encouraging to the trade. During December the pipe lines making reports run from leases through their lines in all fields east of the Mississippi River a total of 2,829,016.91 barrels, the deliveries were 5,751,842.11 barrels, and the stocks held by these concerns at the close of December amounted to a total of 16,751,699.96 barrels, but of this stock held there were included with it 7,909,131.12 barrels of Mid-Continent crude, which would make the actual stocks of Eastern crude on hand amount to but 8,842,568.01 barrels, a considerable decrease in stocks from the November figures.

More wildcat wells are planned throughout the Eastern territory than at any time since they became oil fields. Tests will be made in North and South Carolina, Maryland, Maine, New Hampshire, Connecticut and other sections that are virgin to the drill, and there is no doubt but what the current year will see this wildcat work accomplished.

One of the important completions of the week in West Virginia was the well of the Philadelphia Oil Company on the Homer Loyd lease in the Otter Creek district of Braxton County, that went to a depth of 2700 feet without finding oil in commercial quantities, being 400 feet deeper than any other well in the district. The Blackshere Oil and Gas Company also drilled a well to a depth of 2800 feet on the Black Betsy lease in Pocolatico district, Putnam County, but failed to find anything worth while in the Berea Grit formation.

PENNSYLVANIA COMPLETIONS

Company, well, location	Initial Production bbls.	Depth
Allegheny County—		
S. S. Ferguson & Co., F. Barngart 1	5	....
Chas. McKinney & Co., J. D. White 1	¶1	....
Manufacturers Light & Heat Co., A. Gilfillen 2	¶½	....
Gillfillen & Co., Bob Gillfillen 1	*	....
Larkin & Co., Mary Robinson 1	3	....
Stier, Fried & Co., Viola Davidson 2	2	....
Greene County—		
Carnegie Natural Gas Co., 1 Jesse Morris	¶4	....
Dan Smith 1	¶4	....
Adrain & McCutcheon, McCutcheon 1	¶4	....
Peerless Oil Co., W. Lantz 2	¶4	....

WEST VIRGINIA COMPLETIONS

Company, Well, Location	Initial Production bbls.	Depth
Ritchie County—		
Hope Construction & Ref. Co., Neal Bradley 1	5	....
Carnegie Natural Gas Co., J. C. Hogue 3	¶2½	....
C. A. Ward 4	8	....
Union Central Oil Co., Ross Estate 7	4	....
Pyger Oil & Gas Co., E. R. Nicholson 3	¶1	....
Southern Oil Co., Lynch Heirs 1	¶¼	....
Hope Natural Gas Co., J. T. Hall 1	2	....
Penn Royal Oil Co., C. Lowther 1	*	....
Doddridge County—		
Continental Oil Co., Hudson Heirs 1	*	....
Carter Oil Co., L. M. Stout 12	¶2	....
South Penn Oil Co., Underwood-Orr 2	¶½	....
Pentz & Shrader, Mary Underwood 1	¶½	....
Carnegie Natural Gas Co., Ruth Shrader 1	¶½	....
Monongalia County—		
Philadelphia Oil Co., L. Smith 1	¶5	....
J. H. McDermott Oil Co., J. W. Price 4	10	....
A. P. Oil Co., A. P. Gaught 1	4	....
Gilmer County—		
Hope Construction & Ref. Co., M. J. Fling 1	*	....
Earl Hardeman 1	8	....
Hall & Bush, Wagy-Hardman 1	¶3	....
Carnegie Natural Gas Co., J. Beall 1	*	2350
Lincoln County—		
Guy Meabon, C. E. Gillenwater 2	5	....
Cambridge Carbon Co., C. C. Wolfe 2	¶3	....
Thos. Ray 2	¶3	....
Braxton County—		
Philadelphia Oil Co., Homer Lloyd 1	*	2700
West Virginia Dome O. & G. Co., W. K. Bender 1	*	....
Star Basin Oil Co., A. J. Hall 1	2	....
Marshall County—		
Lynn Camp Run O. & G. Co., A. J. Young 1	¶¼	....
G. B. Patterson, McClain Phillips 2	¶4	....
Carnegie Natural Gas Co., L. E. Conway 2	¶4	....
Calhoun County—		
Godfrey L. Cabot, Matilda Wright 1	*	....
Henry Goodnight 1	¶4	....
Chemical Oil & Gas Co., Bennett Heirs 1	¶4	....

PENNSYLVANIA TANK CARS

We are constantly augmenting and perfecting our manufacturing facilities to take care of your liquid transport requirements—in the construction of new cars, the rapid and economical repair of old equipment, and for leasing purposes.

Our transportation experts will gladly co-operate with you in solving your particular problem.

May we submit our recommendations and figures covering your requirements? Drop us a line today.

Plants at Sharon, Pa., and Kansas City, Kansas.

THE PENNSYLVANIA TANK CAR COMPANY

[*Builders of Tank Cars*]

PENNSYLVANIA CAR COMPANY

[*Railway Cars Built, Rebuilt and Repaired*]

PENNSYLVANIA TANK LINE

[*Lessors of Tank Cars*]

SHARON, PENNSYLVANIA

New York, St. Louis, Kansas City, Tulsa, Houston, Casper, San Francisco, Tampico.

Kentucky Operators Will Start Many New Wells With the Advent of Spring

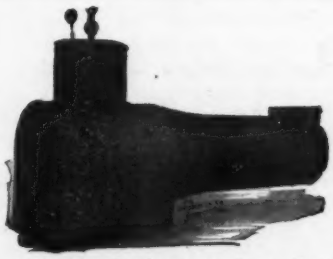
Winchester, Ky., Jan. 15.—With the advent of better weather conditions in Kentucky, several of the more eastern counties of the state will show a large increase in development work. These counties are Johnson, Magoffin, Lawrence, Morgan, Floyd and possibly Martin couny, while in the more central portion, but a part of the field of Eastern Kentucky, are Lee, Powell, Estill, Wolfe, Owsley, Cumberland, Monroe, Russell, McCreary and parts of Wayne county, the latter which is one of the oldest producing counties in the state. In the central protion of the state, the two counties that are attracting attention of the larger operating companies are Cumberland and Monroe. Cumberland is the oldest known producing county in the state, if not in the United States, for oil was found in the county away back in 1818, again in 1829, and another find made in 1840. In 1829 the well which was located a short distance outside of Burkesville, in Cumberland County, was a phenomenal strike and the oil that found its way from the well to the Cumberland River became ignited, and for as far as 20 miles along the river the oil was burning on the water that so frightened the natives that they thought the world was ablaze. Cumberland county has been known as an oil county for many years, but the getting in and out of the county has always been the drawback, and is what has kept the county from being tested out long before the present time. The Paragon Development Company, a subsidiary of the Paragon Refining Company, now has a pipe line in a part of the county and running its oil to the Cumberland River at Neeley's Ferry and from there by barges to Burnside, which is practically the only market at this time for the crude, outside of a small skimming plant at Burkesville and another just across the line at Creelsboro, in Russell county. The production of Cumberland and Monroe Counties is growing to such a state that it requires a market for the crude from the two counties, and the Paragon has started a series of lateral lines spreading out to cover the production of the two counties as much as it can.

The lines of the Cumberland Pipe Line Company are really inadequate to hold the production of the fields it now handles and has just completed a line to Catlettsburg on the Big Sandy river above Louisa and is shipping considerable crude by barges to the Ohio river points.

KENTUCKY COMPLETIONS

Company, well, location	Initial Production bbls.	Depth
Johnson-Magoffin Counties—		
Union Gas & Oil Co		
Jas. Skaggs 9	10	....
Jas. Skaggs 10	10	....
Jas. Skaggs 11	10	....
Jas. Skaggs 12	10	....
Jas. Skaggs 13	10	....
Joe Kelley 1	8	....
Joe Kelley 2	8	....
Joe Kelley 3	9	....
Joe Kelley 4	8	....
Joe Kelley 5	8	....
Herb Skaggs 1	10	....
Herb Skaggs 2	10	....
Herb Skaggs 3	10	....
Herb Skaggs 4	10	....
J. C. Gillam 2	10	....
J. C. Gillam 3	10	....
P. P. Holbrook 11	10	....
P. P. Hilbrook 12	10	....
P. P. Holbrook 13	10	....
Lewis Skaggs 5	10	....
Lewis Skaggs 6	10	....
Lewis Skaggs 7	10	....
Lewis Skaggs 8	10	....
Lewis Skaggs 9	10	....
Henderson Skaggs 1	8	....
Allen County—		
Herbert E. Dixon L. S. Yates 5	30	475
H. E. Bowles, Holland 4	5	325
Batesville Oil Co. L. Boucher 1	10	350
Kenlatex Oil Co. Sarver 15	20	178
Victor DeCaigney Foster 11	10	265
Thompson Oil & Gas Co, Willoughby 14	5	438
Turner & English, Welch 3	5	228
White Plains Oil Co., Nichols 2	5	425
White Plains Oil Co., Dot Oliver 14	8	428
C. E. Dice, J. Haines 1	¶2	448
Allen County Oil Co., Fisburn 3	20	253
Monmouth-Kentucky Oil Co., S. E. Hinton 11	10	219
S. E. Hinton 12	10	222
R. A. Messell, Spurlock 1	20	116
A. M. Gibbs, A. M. Gibbs 1	25	130
DeFoe & Anderson, Boswell 4	5	275
Turner & English, Pearson 2	*	320
Beals & Freeman, Dan Ewing 7	*	320
Brewer & Co., Howell 2	5	473
Warren County—		
Jack Loman Bros., Mary Palmer 4	*	1150
Big Miami Oil & Gas Co., Johnson 300-a, 3	40	1085
Ruby Development Co., Bryant 45-a, 3	15	472
Lee & Co., McDonald 1	*	520
Wellington Pet. Corp., Freeman 4	*	315
Bob Grounds 14	5	400
Fuller Oil Co., C. Morgan 2	5	680
C. Morgan 3	10	1237
Moran Oil & Ref. Co., M. M. Ennis 12	5	975
Foster & Co., Vance 1	*	502
Barren County—		
Federal Oil Co., Nichols 3	25	400
Trabel 2	10	442

Company, well, location	Initial Production bbls.	Depth
Simpson County—		
Haynes & Co., Unknown 1	*	....
Murray Oil Co., Johnson 1	*	....



Bulletin B-7

Quality Products stand out ahead of their field because of the attention given to the minor details. In all Brownell Boilers every rivet, every brace, every staybolt, every plate and detail is so constructed that there will be no "weak link."

THIS MAKES

BROWNELL

SYNONYMOUS WITH QUALITY

Brownell Standard Oil Country Boilers or Oil Country Boilers built according to the A. S. M. E. Boiler Code, are no exception to the Brownell Quality requirement.

THE BROWNELL CO., Dayton, Ohio, U. S. A.

Established 1855

Two Good Producers in Santa Fe Springs Field

Los Angeles, Calif., Jan. 12.—Standard Oil Company has just completed two good wells at Santa Fe Springs. No. 5 on the South Whittier Community is a 3000 barrel well from the Meyer sand, and a new completion on the Santa Gertrudes lease is producing from the upper (3800 foot) zone, making 2000 barrels.

Huntington Beach Producer Is Making 2800 Barrels From Depth of 4949 Feet

Los Angeles, Jan. 12.—New records are being made in everything connected with the oil industry in this state. No sooner is one record chalked up, than it is surpassed. Yesterday Amalgamated Oil Company made a new record for deep well production. This record may last for a month or a week.

Pearce 2 of the Amalgamated at Huntington Beach was completed at 4949 feet, for 2800 barrels initial. Previous to the record made by this well, the deepest big well of the state was the Miley-Keck 19 of the Amalgamated in the same field, completed at 4943 feet, and previous to that record, the Standard Oil Company held the laurels with the Brownrig Kellar well at Santa Fe Springs, at 4762 feet.

Neither of these wells, however, represent the deepest production ever obtained in California, nor are they, as is so blatantly claimed, "The Deepest in the World." In Kern County, California, about 10 years ago the Standard Oil Company completed a well below 5,000 feet, for commercial production, and there have been wells recently completed in Texas, to depths as great as 5400 feet. It is pointed out however, that no well below 5,000 feet has ever made as much as 200 barrels of oil a day. On the basis of depth and production combined, the Amalgamated's Pearce 2 certainly holds a record.

Huntington Beach is beginning to crowd Long Beach and Santa Fe Springs for production. The deep sand is showing up magnificently. Amalgamated has five wells completed at the lower level, all of them first raters. Petroleum Midway and Standard Oil Company are also getting good results from going to the lower measures.

Shell Company completed a redrilling job at Ashton 4 for 3000 barrels at 4924 feet, quite a hole in itself. Texas Holding Company's 1, redrilled, is a 2000 barrel well at 4500 feet. Deeper drilling is attracting more attention than anything else in this field, and it is the oil from the lower reaches of the known oil measures that is boosting the daily recovery from this field to the point which is crowding 90,000 barrels a day.

Long Beach

Long Beach production has shown a gain over the past two weeks, in spite of the weak spot that developed right in the heart of the field. Enough new oil has been accounted for to more than offset the loss from the 10 to 12 wells which have gone down to small production, or have failed altogether, on the northwest side of the hill. The daily recovery from Long Beach is estimated at 115,000 barrels this week-end.

Keck Syndicate 4, well 1, is a headliner for this field. At 3800 feet it is flowing at a 5,000 barrel clip, and the Acme Oil Company got a 1500 barrel well on the Dameron. Joseph Dabney's 5 is estimated at 2800 barrels, and A. T. Jergins' 2 is rated at 5,000 barrels. Shell Company's Pickler 4 and Shaver 1 are both good wells. Pugh and Miller Drilling Company com-

Potential Daily Output of California Fields at Present Is 600,000 Barrels

Los Angeles, Calif., Jan. 12.—The concern which oil producers in this state are showing over the excess production of oil is less than it was six months ago. It is a matter of some concern now, whereas it was a matter of agitation at that time.

The fact that the state is producing 520,000 barrels of oil with 72,000 barrels a day shut it, does not seem to impress the producers themselves like it did when the state was showing 400,000 barrels a day, and it was becoming apparent that some wells in the valley would have to be capped or there might be a flood. These wells have been capped, several hundred of them, but that did not stop the flood. Nor has the flood stopped drilling activities. The reduction of the price of crude last spring and summer, to a base price of 60 cents a barrel, had no appreciable influence on activities. The recent cut in the price of light oil, amounting to 50 cents a barrel for 35 gravity crude, has caused little comment.

When the price cuts were made last year, independent producers worried. They wondered if they could continue to operate. They found that they could, due to the proven gusher sands at Long Beach, Huntington Beach and Santa Fe Springs. The last cut in price, January 6, brought a laugh, and "Well, by gosh, they cut 'er again. Wonder what it'l be next." That's about the way the price reduction was received.

California could be producing 600,000 barrels of oil a day by the end of January, or probably within a week from this date, if the 72,000 barrels that is shut in in the valley was being taken. As it is, the mere fact that more than half a million barrels of oil a day are being produced in this state seems to cause no great alarm, even though it is well known that the refineries are processing only about 350,000 barrels a day, and are accumulating excessive stocks of gasoline when they do that. The difference between 350,000 and 525,000 represents the excess of production over present day consumption (as represented by refinery intake).

What's happening? Simply this: the excess production of crude oil is going into storage, mainly, with a small amount moving by water to the Atlantic Coast. In a general way it may be said that storage is taking care of the bulk of the excess production of refinable crude.

This stored oil will have to pay for its storage. In addition to that it will have to take care of the interest on the investment it represents, and also take care of the depreciation which it will suffer by evaporation. This latter loss is less for California oil than for Mid-Continent grades. On the basis of such argument, the producers of crude in this state are finding some encouragement. They see the time in the future when the price of crude and of refined oils will have to be advanced to the point where the stored oil can be withdrawn from storage at a price which will pay the costs accumulated against it.

California Men Take Course in Technology

Bakersfield, Cal., Jan. 12.—Sixty-five oil men are taking a night course in oil technology at the Kern County Union High School in this city. The men represent drillers, field workers, production men, as well as oil salesmen. The work is under the direction of Howard E. Vivian, and the courses include drilling, cleaning and reconditioning wells, transportation and refining.

Los Angeles, Jan. 12.—Twenty-seven new wells were started in California during the first 6 days of the new year, as compared with 17 for the same period during 1922. There were 32 tests for water shut-off, and 11 deepening or redrilling jobs.

Los Angeles, Jan. 12.—A branch office of the State Mining Bureau, Oil and Gas Division, has been opened at Long Beach on the corner of Willow and Walnut streets, in charge of W. L. Williams and R. L. Keyes.

John Saladin, cashier of the Prairie offices in Tulsa, is back at his desk, after a vacation of a month. According to post cards he sent back to his fellow workers, John penetrated into Hollywood and covered the Pacific Coast states in his month of rambling.

While Saladin was away, K. O. Bundy, scout for the Prairie in Northwestern Oklahoma, returned to Tulsa and held down the cashier's desk.

H. R. (Hal) Gruber, manager of the Williamsport Wire Rope Distributing Company, has returned to Tulsa after a business trip in the East, where he visited the main office and works of the Williamsport Wire Rope Company at Williamsport, Pennsylvania.

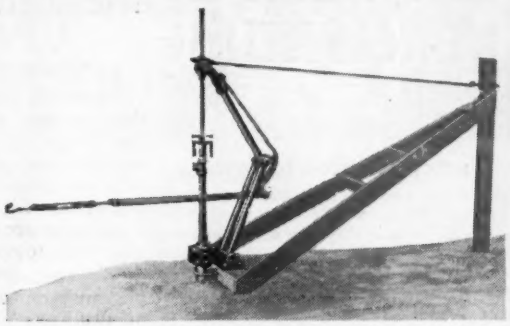
---

pleted D'Angelo 1 for a nice well, at the 4,000 foot level.

The fact that some 10 or 12 wells in a small area at the base of Signal Hill on the northwest, have gone bad does not seem to cause any great amount of worry among producers. If it is found that these wells cannot be cleaned out and reconditioned with the use of cement, it is believed that they will all be drilled to a lower zone, and made productive again. There is no way to hold down this field.

Lightning Pumping Jacks

Can be used on wells of any depth that are pumped with shackle lines. Especially suitable for wells making water.

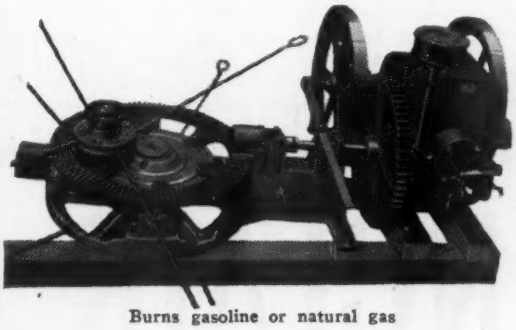


All Metal Construction

Wide range or variable stroke—10 to 30 inches—entirely adjusted with turnbuckle, permitting pumping of wells of varying depths even though one may be heavy producer and balance small ones.

Long fulcrum rod (12 ft.) affords almost perpendicular movement to polish rod with greater pumping capacity and less wear on valves and cups and less tendency to crystallize sucker rods.

No agitation of oil by cutting. Few wearing parts. Easy to install. Big saving on operation.



Burns gasoline or natural gas

Lightning Pumping Powers

Are economically adapted to leases requiring small power with maximum pull.

Lightning Powers are being satisfactorily used on from one to six wells with 6 or 8 horsepower engines.

On leases pumping as many as 25 wells four Lightning Powers are more advantageous than one central power, as production does not stop simultaneously when shutdown is necessary as in case of central power.

Powerful straight line pull—Shorter shackle lines reduce vibration of line and sucker rods. First cost is less.

Acquaint Us With Your Particular Problem

Address Oil Well Supply Department

Kansas City Hay Press and Tractor Company

KANSAS CITY, MO.

MEXICAN PRODUCTION

The daily average production of crude oil in the Mexican fields for two weeks past by fields is divided about as follows:

	Week Ending Jan. 6	Week Ending Dec. 30
Cerro Azul-Toteco	91,500	92,000
Tierra Blanca Chapapote	70,500	70,000
Central Amatlan	39,000	45,000
Potrero del Llano	38,000	35,000
Los Naranjos	13,000	13,000
Tepetate Casiano	7,000	6,700
Chinconcillos	2,500	2,000
Alamo	2,000	1,900
San Geronimo	1,000	2,500
Total Light Oil	264,500	268,100
Panuco Dist. (Heavy)	156,000	159,000
Total Mexico	420,500	427,100

Tampico, Jan. 13.—The Huasteca lost a 55,000 barrel tank on lot 228, Amatlan, by fire last Sunday. It was reported that the tank contained about 3000 barrels of oil.

Tampico, Jan. 13.—Kern Mex Oil Company's No. 51-K La Palma is good for 350 barrels at 2310 feet. The well is located on the eastern boundary of Cacalilao.

Mexican Production in December 2,000,000 Barrels Over November

Tampico, Jan. 13.—The total production for all Mexican fields in December was about 14,251,000 barrels against only 12,300,000 barrels in November, an increase of about 2,000,000 barrels.

In December, 8,851,000 barrels was produced in the Southern fields against 7,700,000 barrels in November, while the Panuco heavy oil production was 5,400,000 barrels in December against 4,600,000 barrels the previous month.

The production in both light and heavy fields took a spurt early in the month, when the wells in the South fields were being flowed for all they were worth, while the movement of heavy oil from Panuco taxed the pipe line facilities. A decline in both sections was noted around the close of the month, with a chance of further declines, especially in the South fields.

The daily average production for the South fields the week ending December 6 was 264,500 barrels against 268,100 barrels the previous week. For the week of December 6, the Panuco district production average was 156,000 barrels daily, a decline of about 3000 barrels daily when compared with the previous week.

Toteco must look to the present wells for future production, if the action of the International in having to abandon its last well means anything. The International's No. 25 Toteco some weeks ago came in for about 10,000 barrels, but since that time this company found salt water in No. 24 at 2212 feet.

Tampico, Jan. 13.—Two pipe line projects to serve Cacalilao are occupying attention. Sam Weaver, A. J. Manson and others propose to organize a company to build a line to La Isleta to handle production of Credito Petrolero, La Espuela Oil Company, Zacamixtle Oil Company and other free oil. The company plans call for the expenditure of about $500,000. Another eight inch line from the same area is planned by S. G. Venable, S. en C., the project reported to be already with finances in hand. It is proposed to handle around 20,000 barrels daily.

Tampico, Jan. 13.—The Freeport and Mexican's No. 4 Chote, Potrero del Ojital, has been completed for about 2500 barrels at 1850 feet.

SINCLAIR OILS

Petroleum Products of Quality

SINCLAIR OILS

GASOLINE LUBRICANTS
KEROSENE PARAFFIN WAX
NAPHTHA FUEL OIL
GAS OIL ROAD OIL

SINCLAIR REFINING COMPANY
Cable Address "Sorcorp"
111 W. Washington St., Chicago Ill.
SINCLAIR OIL BUILDING 45 Nassau St. New York

WILDCATS FROM ALL SECTIONS

Three Tests Started Near Showing Found in Eddy County, New Mexico

Albuquerque, N. M., Jan. 15.—Following the discovery of a shallow producing area in Eddy County, about midway between the towns of Lakewood and Dayton, by the New Mexico, Kansas and Texas Oil Company last month, good for 20 barrels of oil daily on the pump, three new tests are getting underway and leasing activity is greatly on the increase. This well is reported to have encountered three separate oil sands at close intervals, and the gas production accompanying the oil is making it difficult to operate the pump, with occasional heads flowing over the casing. Since the well has not been thoroughly cleaned out it is believed that production will be increased later on. The oil is free of water and b.s., and is reported to test about 35 gravity.

The owners of the discovery well have announced that an offset test will be spudded in immediately, while Vandagriff and associates are preparing to sink a test about four miles to the west. The Illinois Producers Company has moved a rig to a location made across Pecos River and about eight miles northeast of the producer, and has made contract for fuel oil needs with the owners of the discovery well. Eddy County is located in the southeast corner of New Mexico, and extends to the Texas border.

San Juan County, in the northwest corner of New Mexico, is forging its way to the front as a future oil field as result of competition of both oil and gas wells during the past year. The well that precipitated the "near boom" that is getting underway is the basin of the San Juan River was drilled by the Midwest Refining Company on the Navajo Indian Reservation last September between the town of Farmington and the Hog Back Mountains. It encountered a sand around the 780 foot level, and has gauged as high as 350 barrels daily according to a representative of the Bureau of Mines now assisting in cementing off water trouble in the bottom of the hole. The Midwest Company is moving in equipment for two additional tests, one of which is to start drilling shortly about a quarter of a mile from the producer. Producers and Refiners Corporation is assembling materials to drill a test on the Ute Indian Reservation in the Laplata river section of San Juan County. This test will be a short distance south of the big gasser brought in last year by the Mid-West Refining Company.

Coastal Wildcats

ANDERSON COUNTY—J. F. Winans et al's Parker 2, dr 2050 ft. Roeser Pet. Co.'s Brooks & Auld 1, sd 4140 ft. Hughes et al's Turner 1 dk. Palestine Oil Dev. Co.'s Hugo Monnig Plantation 1, sd 1685 ft.

AUSTIN COUNTY—Owens et al's Watson 1, dr 2025 ft.

BASTROP COUNTY—Elgin Oil Synd.'s Ramsey 2, set cas 2850 ft. Smithville Drilling Co.'s Adanchick 1, sd 1000 ft. Triangle Oil Synd.'s Fritag Valenta 1, setting 8-in 2165 ft. J. L. Watson 1, sd 430 ft.

BRAZORIA COUNTY—E. P. Malloy et al's Emmett 1, dr 3650 ft. Rancho Isabello Synd.'s Rudiger 3, sd 4800 ft. Mustang Oil Synd.'s Allison 2, sd 3675 ft. Transcontinental Oil Co.'s Breen 2, lcn. William Sack's Hogg Ranch 1, sd 2600 ft.

BURLESON COUNTY—Federal Prod. Co.'s Giesschlag 3, set cas 900 ft. Frank Balcer et al's Marek 1, sd 1440 ft. Caldwell Pet. Co.'s Gilley 1, testing 2136 ft. Swastaca Oil Co.'s Rogers 1, co 2800 ft; Rogers 2, set cas 1550 ft.

BELL COUNTY—Noland-Bell Oil Co.'s Bacon 1 sd 2125 ft. J. B. Hartman's Warrick 1, sd 2335 ft.

CALDWELL COUNTY—The Cooper-Hitchcock & Feltner 1, sd 1425 ft.

CAMERON COUNTY—Rio Grande & Gulf Co.'s Champion 1, sd 4690 ft.

CHEROKEE COUNTY—Colliton Oil Co.'s Clapp 1, sd 2750 ft.

COLORADO COUNTY — Columbus Bernard Oil Corp.'s Kaiser 1, dr 1925 ft.

ELLIS COUNTY—Beecher et al's Witherspoon 1, dr 3990 ft. Rolck-Banday's Hoosier 1, sd 1000 ft.

FORT BEND COUNTY—Gulf Prod. Co.'s Davis 2, sd 4030 ft; Wheat 3, drill stem stuck 3725 ft; Davis 3, lcn, 1500 ft. north of Wheat 1. Big Creek Oil Co.'s Moore & Hager 1, sd 2390 ft. Neilan Oil & Ref. Co.'s Gobbels 1, dr 3250 ft; Brown 1, dr 3400 ft. Booth Oil & Dev. Co.'s Booth 1, dr 1625 ft Iona Synd.'s Moore 1, at Moore's Mound, sd 3533 ft; Hellmuth 1, rigging up. Richmond-Fort Bend County Oil Synd.'s Bryan 1, dr 1395 ft. Dr. Miller Armstrong 1 sd 550 ft.

GONZALES COUNTY—Pioneer Oil Co.'s Patterson 1 sd 2100 ft. H. W. Brewer et al's Billings 1 sd 1255 ft. Bryan & James' Moses 1, dr 425 ft. J. K. Hughes Dev. Co.'s Stevens 1, set cas 1800 ft.

GALVESTON COUNTY—Sun Co.'s Guedry 1 dr 2130 ft; Cade 5 rigged up; Cade 6, lcn. Carleton et al's McCormick 1, dr 1625 ft. Texas City Oil Corp.'s Logan & Cook 1, sd 700 ft. Gulf Coast Interests' White 1, dr 1650 ft. Galveston

Established 1867

The Vilter Manufacturing Co.

1152-1162 CLINTON ST., MILWAUKEE, WIS.

Vilter High Speed Horizontal Refrigerating Machine

Vilter Equipment is used in many of the oil refineries.

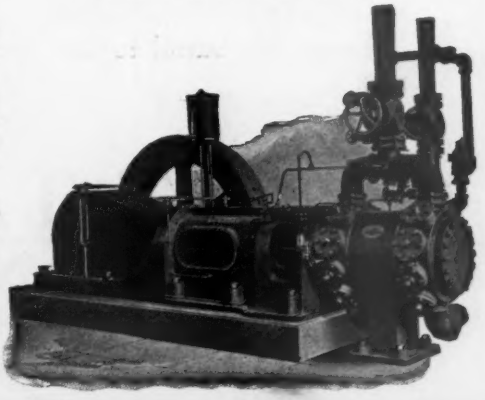
Vilter-Milwaukee typifies the true standard of reliability in machinery construction and refrigerating engineering.

Vilter Low Temperature Compression System (for efficiently producing low temperatures with compression system).

Vilter Sales Engineers always at your service.

Branch offices in all the principal cities.

Builders of REFRIGERATING MACHINERY, OIL COOLING COILS, GASOLINE CONDENSERS, ETC.



Oil Co.'s Cash 1, lcn. High Island Oil & Dev. Co.'s Fee B-1, sd 800 ft.

HARRIS COUNTY—Garrett Oil Co.'s Townsite 2, at Channel City coring 3430 ft. Monarch Oil & Ref. Co.'s Hautier-Moyle 1, at Green's Bayou, r to bottom and preparing to set 6-in 2800 ft. Betty Lee Oil Co.'s Neese 1, sd 1870 ft. Tar-Tex Oil Co.'s Stewart 2, sd 1800 ft. Willow Mound Oil Co.'s Gebhart 1, sd 2200 ft. Ship Channel Oil Co.'s Atkinson 2, rigged up and sd. Giesecke et al's Giesecke 1, dr 3175 ft. Texas & Southern Pet. Co.'s Riden 1, sd 3270 ft. Industry Oil Co.'s Peterson 1, dr 2460 ft. Pulaski Oil Co.'s Singleton 1, dr 3150 ft. Texas Exploration Co.'s Warren 10 dr 1225 ft; Warren 12, spudded in.

HARDIN COUNTY—Votah Oil Co.'s Swift 1, sd 2120 ft. C. G. Hooks et al's Dey 1, sd 1400 ft. E. F. Simms' Olive Sternenberg & Co. 1, sd 600 ft.

HENDERSON COUNTY — Hayes et al's Woods 1, sd 2675 ft.

JEFFERSON COUNTY—Houston Oil Co.'s Statti 1, at Big Hill sd 1596 ft.

MADISON COUNTY — Midway Oil Co.'s Sea 1, dr 2085 ft.

MATAGORDA COUNTY — Wilkerson et al's Wadsworth 1 preparing to test, 4300 ft. Kirk Himill's Smith 1, at Markham, sd 3300 ft. Monarch Oil Synd.'s 1, sd 3600 ft. John Deering's Meyers 1, dr around 1100 ft.

MONTGOMERY COUNTY—Tam-Tex Prod. Co.'s McDermott 2 sd 1285 ft. Wilburton Oil Co.'s Smith 2, sd 1200 ft. J. B. Hewitt's Folson 1, lcn. Compers Oil Co.'s Madley 1 sd 1000 ft. Hoosier Bell Oil Co.'s Wren 1, cored 2870 ft. Montgomery County Oil & Dev. Co.'s Shawver 1, dr 520 ft. San Jacinto Oil Co.'s Peterson 1, bailing 1360 ft.

WALKER COUNTY — Lancaster-Dick et al's Eastham State Farm 1, sd 3325 ft; Vivian 1, sd 1850 ft.. Currie et al's Ferguson State Farm 1, r 3225 ft. Walker-Maderson Oil Co.'s 2, dr 2580 ft. Shackelford et al's 1, dr 2340 ft. Prison Commission's Prison 2, sd 3465 ft. Lewis-Huntsville Drilling Synd.'s Jones 1, dr 2450 ft. Union Oil Co.'s 1, lcn.

WHARTON COUNTY—Gulf-Atlantic's G. H. Northington Farm 1, dr 2850 ft. Hamilton Oil Assn's Barkley 1 dr 2750 ft.

Central West Texas Wildcats

COMPLETIONS

Company, Well, Location		Initial Production bbls.	dep'h
Brown County—			
Canyon Oil & Gas Co. & Slick's Starr 2,	¶	5	1480
Tippett & Sons et al's J. W. Tabor 1	*		2175
G-H-G Oil Co.'s J. H. Ray 1..		8	1655
Miller & Malloy' Hickman 1..	*		1515
Callahan County—			
Arratka et al's J. M. Isenhower 1.	*		445
A. G. Ilseng et al's G. Anthony 1	*		665
Kendig et al's J. M. Isenhower 2 .	*		305
Neibarger et al's Odell 1	¶	2	305
Tarkington & Grace's W. A. Ramsey 1	*		195
Grace & Johnson's D. E. Parks 1 .	*		605
Kennedy et al's L. J. Kelly 1..	*		455
L. J. Kelly 2.....	*		445
Manley-Borealis' H. Wagley 1..	*		605
F. W. Stone & Co.'s McDermitt 1 .	*		3825
Howard County—			
Fensland Oil Co.'s C. D. Read 1 .	*		3588
Lampasas County—			
Western Lampasas Oil Co.'s Whittenburg 1	*		3755
Palo Pinto County—			
Dittman Oil & Gas Co.'s Hughes Heirs 1.....	*		3815
Producers Oil & Gas Co.'s R. S. Dalton 1	*		205

Bolted and Welded Tanks

When Quality, Service and Construction are considered, Gantz Tanks are immediately taken into consideration.

Armco Iron is used exclusively, which speaks for the Quality.

Our customers vouch for the Service.

The Gantz tank Construction is accurate, since up to date equipment is used in all details of manufacture and erection.

"The greater the pressure the tighter they become."

From one barrel to two thousand barrels.

GANTZ TANK COMPANY

SAPULPA, OKLAHOMA

SWAN UNDERREAMERS

"Lose No Cutters"

AT YOUR SUPPLY STORE

Made By BRIDGEPORT WICHITA

Company, well, location	Initial Production bbls.	Depth
O. R. Rochelle's Fee 1.....	*	4485
Pecos County—		
Bowser, Hale & Lamb's University 1	*	1705
A. S. Luse et al's G. W. Allison 1	*	205
Hock et al 1.....	*	305
Polk Prospecting Co.'s 1,.....	*	1220
Greer et al's Burnett 1.....	*	430
Tarrant County		
Erie Oil & Gas Co.'s Sieber 1..	*	515

DRILLING REPORT

BROWN COUNTY—Bailey et al's Mrs. M. L. Cleveland 1, sd 1340 ft; J. B. Turner 1, sd 1730 ft. Fox & Lamb's M. M. Cox 1, dr 1950 ft. Goldrick et al's Fred Turner 1, showing gas in lime 2005 ft, dr 2030 ft. Bob Gillman et al's Newton 1, set cas 1085 ft. Junior Oil Co.'s Byrd 1, sd 1340 ft. LeBaugh et al's (formerly Wallace et al) Edrington 1, dr 2590 ft. Leonard et al's Prather 2, sd 1650 ft. Maher Bros.'s Bohara 1, sd 2155 ft. Madison et al's M. J. Hall 1, plugging back from 1955 to 1650 ft for shot. Omaha Southern Pet. Co.'s T. M. Windham 1, rig; Gaines 1, rig. Price et al.'s Blair 1, rig Scott & Anderson's W. R. Chambers 1, fsh tools after shot 2375 ft. Stine et al's L. L. Evans 1, sd 850 ft. F. W. Stone & Co.'s Wright 1, dr 300 ft.

CALLAHAN COUNTY—Bible et al's G. C. Wood 1, fsh tools 355 ft. Bryon-Union Oil Co.'s Hennessey 1, sd 3315 ft. Dudley Oil & Gas Co.'s Hugh Moore 1, sd 1555 ft. J. A. Dickey et al's Qualls 2, lcn. Edgett Petroleum Co.'s T. W. Woody 1, sd 1370 ft. G. S. Fry et al's H. W. Ross 1, dr 625 ft. Frizzell et al's J. A. Hutchinson 1, fsh tools 535 ft. Hart & Sons et al's E. W. McCullom 1, sd 515 ft; McCullom 2, sd 280 ft. Holderman et al's J. L. Wood 1, dr 345 ft. G. A. Ilseng et al's J. S. Hart 2, spudding. Lincoln & Wallace et al's J. S. Hart 2, cas trouble 420 ft. Walter McGinnis' Cora Grisham 1, spudding. W. P. Morris' H. H. Ramsey 1, spudding. Manley-Borealis' H. Wagley 2, spudding. O. A. Payte et al's W. E. Powell 1, dr in oil sand 415 ft. Homer Peoples et al's Hughes 1-A, sd 515 ft. R. C. Wylie 1, dr 180 ft; H. D. Taylor 1 spudding; Taylor 2, dr 300 ft. Scarbough & Reagan's L. T. James 1, connecting to pump 478 ft. Simmons Supply Co.'s (formerly W. E. Taylor et al) W. E. Clinton 1, sd 280 ft. Wilde et al's John L. Wood 1, dr 415 ft. M. T. Yates' J. S. Hart 1. dr 425 ft.

Texas Panhandle Wildcats

(NOTE—The drilling report below does not show wells that are shut down indefinitely.)

CARSON COUNTY—Gulf Prod. Co.'s S. B. Burnett 3, set cas 2275 ft. W. W. Silk et al's S. B. Burnett 2, dr 595 ft. Temple et al's D. A. Harrell 1, dk. Tipton et al's McConnell 1, fsh 2600 ft.

CHILDRESS COUNTY—A. R. Anderson's F. Givens 1, sd 100 ft.

COLLINGSWORTH COUNTY—Campbell et al's Stokely 1, sd 1765 ft. United Oil Co.'s Hennard 1, dr 3300 ft.

DALLAM COUNTY—J. M. Kellerman's James 1, dr by junk, td 1650 ft.

DONLEY COUNTY—Atlanta Oil & Dev. Co.'s Grogan 1, sd 3650 ft. Swanson Oil Co.'s Moreman 1, dr 3190 ft.

GRAY COUNTY—J. Harvey et al's Brown 1, sd 3095 ft. W. W. Silk et al's G. W. Medley 1, dr 3450 ft.

HUTCHINSON COUNTY — Coble Haywood Synd.'s Coble 1, dr 3915 ft. Capital Partnership Pool's E. Cockrell 1, rebuilding dk, td 50 ft. Gulf Prod. Co.'s Dial 1, sd 3066 ft. W. H. Homes' J. F. Weatherly 1, sd 330 ft. H. T. McGee et al's Smith-Cappers 1, sd 3166 ft. J. Whittington's R. Sandford 1, dr 2325 ft, making about 5,000,000 ft gas.

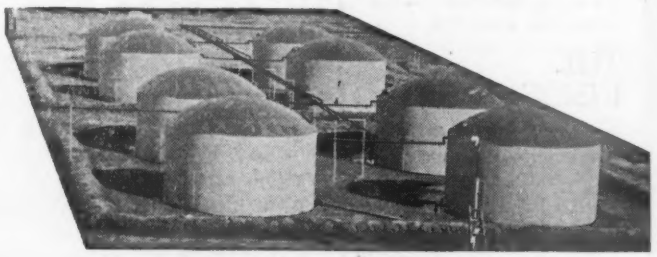
POTTER COUNTY — Amarillo Oil Co.'s Masterson 3, dr 3050 ft. E. A. Hines' Masterson 2, dr 1960 ft., making about 15,000,000 ft gas.

North Texas Wildcats

(NOTE—The drilling report below does not show wells that are shut down indefinitely.)

CLAY COUNTY—Campbell Oil Co.'s J.

Oil Storage Tanks Fabricated and Erected
Either Standard or Special Design



GALVANIZED CORRUGATED TANKS
STEEL TANKS
WE BUILD OIL REFINERIES COMPLETE
Wire, Write or Phone
Wyatt Metal and Boiler Works
DALLAS, TEXAS

SWAN
UNDERREAMERS

AT YOUR
SUPPLY STORE
Made by BRIDGEPORT WICHITA
"Pipe Always Follows"

Sensation Belting

For DRILLING
PUMPING
and POWER
TRANSMISSION
SERVICE
Mfg. only by
VOORHEES RUBBER MFG. CO.
Jersey City, N. J.

STEEL WORKING BARRELS

Should Be More Than

SEAMLESS

HOUGH SEAMLESS STEEL WORKING BARRELS

Are uniform in physical properties and chemical contents.

THE INSIDE FINISH

is hard, which insures longer life against cutting sand — Smooth, highly polished—means valve cups will last longer.

THE TUBES

are straight and true to size—accurate to diameter, gauge and wall thickness.

THE COUPLINGS

are of heavy design, threads properly aligned and concentric with the taper seat in the lower coupling which insures lower valve seating correctly.

UNIFORM DEPENDABLE HIGH QUALITY

Your Dealer will supply you

Look for the label

The Charles N. Hough Manufacturing Co.

"Where the Reliable Oil Well Supplies Come From"

Franklin, Penna.

OIL WELL SPECIALTIES

H. Spivey 1, co 690 ft. Clark & Cowden's J. F. Turner 1, dr 1450 ft. Dean & Morris' E. F. Davidson 1, dr 2000 ft. Gulf Prod. Co. C. M. Worsham 1, dr 3470 ft. Nebraska Oil & Gas Co.'s W. H. Myers 1, dr 3000 ft. Lone Star Gas Co.'s Miller 9, re-cementing casing 1144 ft; Miller 10, rigged up. Panhandle Oil Co.'s J. N. Craig 1, dr 800 ft. Riddle et al's W. J. Hawthorne 1, fsh 2000 ft. Scaling Oil Corp.'s George Scaling 1, fsh 980 ft. The Texas Co.'s N. H. Martin 6, set cas 1765 ft.

COOKE COUNTY—Big Indian Oil Co.'s B. W. Davis 1, ur 750 ft. J. W. Donehoo's B. Gunter 1, sd 2268 ft. Red River Drilling Co.'s Whaley-Jones 1, fsh 1200 ft.

DENTON COUNTY—Gen. E. Lee Synd.'s J. H. Lee 1, dr 3000 ft. Hill Crest Oil & Dev. Co.'s J. N. Rayzor 1, sd 910 ft.

FANNIN COUNTY—Danciger Oil & Refining Co.'s Kain 1, fsh bit 2255 ft. Royal Palm Oil Co.'s (formerly Elkay Oil Co.) Wilson Lane 1, bailing water 3135 ft. Keene & Keene's Stephens 1, dr 2600 ft. Telephone Oil Co.'s Moore 1, sd 1800 ft.

GRAYSON COUNTY—Zee Tex Oil & Dev. Co.'s G. W. Cannon 2, dr 1740 ft; Griffin 1, sd 1050 ft.

HARDEMAN COUNTY—Frizell et al's M. S. Winbury 1, sd 2905 ft.

HASKELL COUNTY—Commonwealth Oil Co.'s Ballard 1, sd 1000 ft. Glenn Pet. Co.'s Reynolds 1, dr 2100 ft. Wert & York's R. V. Colbert 1, sd 2200 ft.

JACK COUNTY—Avis Dev. Co.'s Davis 1, sd 265 ft. Fortuna Oil Co.'s Halsell 1, dr 2140 ft. Mercier & Casey's J. Pruitt 1, sd 100 ft; M. Hoefle 1, sd 200 ft; Jackson 1, dr 200 ft. Mitchell Oil Co.'s Myers 1, sd 1300 ft. Ralco Oil Co.'s Loving 1, dr 4575 ft. Ranger Oil & Gas Co.'s Mrs. E. Leatherwood 1, set casing 3500 ft. Silver Star Drilling Corp.'s Coker 1, sd 950 ft.

MONTAGUE COUNTY—Bowie Chief Oil Co.'s C. H. Boedeker 1, sd 1765 ft. Boyd Drilling Co.'s Dr. Potter 1, sd 2510 ft. Boyd Oil Co.'s J. W. Maddox 1, dr 700 ft. Guaranty Fund Oil Co.'s Mrs. E. A. Jordan 1, dr 1270 ft. Montague Synd.'s Wm. Summerour 2, dr 115 ft. Pansy Oil Co.'s Cassell Heirs 1, rigging up. Prime Oil Co.'s M. J. Cook 1 dk. Schocker & Bass' A. A. Croxton 1, sd 50 ft. J. A. Sheppard's L. Crenshaw 1-A, dk; L. Crenshaw 1-B, dr 225 ft. Spencer & D'Yarmett's Wilson 1, dr 210 ft. The Texas Co.'s J. E. Lemons 1, dr 2000 ft. Tidal Oil Co.'s J. M. Handley 1, dr 195 ft.

WILBARGER COUNTY—Aurora Oil & Gas Co.'s F. Ogleby 1, dr 2770 ft. Griswold Oil Co.'s W. T. Waggoner 1 ur 1075 ft. Heard Bros.' D. H. Vaughn 1, dr 115 ft. Hobbs Oil Lsg. & Dev. Co.'s W. T Waggoner 1, dr 1560 ft. Hobbs Bros.' E. A. Yarbrough 3 dr 2295 ft. Mutual Oil & Gas Co.'s A. B. Wharton 1, sd 460 ft. Number Nine Oil Co.'s W. T. Waggoner 2, dr 1280 ft; Waggoner 3, sd 225 ft; Waggoner 4, sd 300 ft;

Announcing

A new and decided improvement in

OIL WELL DRILLING JARS

We have long realized the need of a Jar which would not only stand up under constant vibration without breaking, but which would also carry a greater amount of wearing qualities.

It is through the efforts of our Mr. E. J. Dunigan that we are able to offer our

Double Knocking Head Jars

For sale at any of our Branches or distributors

Muskogee Tool Company

Main Office and Works at Muskogee, Oklahoma

If Better Tools Could Be Made, We'd Make 'Em.

RECOGNIZED PETROLEUM GEOLOGISTS

EUGENE COSTE & CO.
Petroleum Engineers and Geologists
DALLAS, TEXAS
Dallas County State Bank Building

SAMUEL J. CAUDILL
Geologist—Petroleum Engineer
Valuation - Depletion
For Financial or
Income Tax Purposes
818 Atlas Life Ins. Bldg., Tulsa, Okla.

O. H. Eichelberger
CONSULTING GEOLOGIST
Management and Reports
Texas and Louisiana Properties
410 West Bldg., Houston, Texas

ALEXANDER DEUSSEN
CONSULTING GEOLOGIST
Reports—Appraisals—Management
Texas and Louisiana Oil Properties
504 Stewart Bldg. Houston, Texas

EDWIN B. HOPKINS
CONSULTING GEOLOGIST
25 Broadway
NEW YORK

GEO. C. MATSON
Petroleum Geologist and Engineer
Geological Surveys
Appraisals for Taxation or Financing
Phones Osage 2049 - 1833
408 Cosden Bldg. Tulsa, Okla.

ROBERT T. HILL
GEOLOGIST
816 Magnolia Building
DALLAS, TEXAS
200 Currier Building
LOS ANGELES

DORSEY HAGER
Petroleum Geologist and Engineer
Geological Examinations
Appraisals and Valuations
Pacific-Finance Bldg., Los Angeles
522 Fifth Ave., New York

Waggoner 5, lcn. C. M. Taylor's E. A. Yarbrough 1, dr 1220 ft. Zacaquiesta Oil Co.'s A. B. Wharton 1, sd 2395 ft.

WISE COUNTY—Booneville Oil & Gas Co.'s J. C. Castleberry 1, dr 600 ft. Flickenger et al's Whatley 1, co 3858 ft. Herbert Oil & Gas Co.'s R. B. Banks 1, dr 605 ft. Michigan Oil & Gas Co.'s Young 1, dr 2140 ft. Scott & Hunter's Askey 1, dr 2330 ft.

Louisiana Wildcats

COMPLETIONS

Company, Well, Location	Initial Production Bbls.	Depth
Bossier Parish—		
Hoenkle et al Freeman 1, 15-18-12	*	3233
Claiborne Parish—		
W. H. C. Oil Co. Dillon 1, 11-19-7	*	3070
Evangeline Parish—		
La. Oil Ref. Corp. Vidrine 1, 36-3-1	*	1598

DRILLING REPORT

BIENVILLE PARISH — Smitherman et al's Anderson 1, 29-18-5, dr 60 ft. Standard Oil Co.'s Stephens 1, 21-17-8, dk. Wadley et al's Lawhon 1, 8-16-8, dr 1970 ft.

BOSSIER PARISH—Andores Oil Co.'s Bolinger 1, 22-23-13, sd 3002 ft. Autrey et al's Smith 1, 26-19-11, dr 410 ft. Corbett et al's Atkins 1, 4-18-12, sw 1300 ft. Collins et al's Gray 1, 29-19-13, dr 3030 ft. Sales et al's Bolinger 1, 32-23-11, dk.

CLAIBORNE PARISH—El Dorado Chief Oil & Gas Co.'s Kinder 1, 32-22-7, reaming 3196 ft. Esto Oil Co.'s Tuggles 1, 31-21-6, testing 2135 ft. Fullenwilder et al's Fullenwilder 1, 7-23-6, dr 1500 ft. Meyer et al's Boatner 1, 20-19-5, sd 2250 ft. Orleans Refining Co.'s Field 1, 22-19-5, sd 1427 ft. Steuben Oil & Gas Co.'s Taylor 1, 16-22-6, dk. Tigner et al's Harman 1, 14-20-6, dr 2145 ft. Summerfield Oil & Gas Co.'s Nolan 1, 34-22-4, dk. Ziegen et al's Hampton 1, 13-20-7, sw 1440 ft.

DE SOTO PARISH—De Soto Oil & Gas Co.'s Bland 1, 11-11-16, fresh water 250 ft. Pilgrim Oil Co.'s Ramsey 3, 34-131 16, 4575 ft. Snell et al's Connell 1, 8-12-14, abn 2991 ft.

LINCOLN PARISH—Roxana Petroleum Corp.'s Thomas 2, 24-18-4, ru cable tools 2866 ft.

SABINE PARISH—Brown et al's Bowman-Hicks 1, 7-7-12, dr 2415 ft. Bowman-Hicks 2, 15-7-12, abn 410 ft. Gladys Belle Oil Co.'s Belmont Rains 1, 32-9-11, r 3600 ft. Pathfinder Oil Synd.'s Long-Bell 1, 8-8-13, dr 3200 ft. Zwolle Oil Co.'s Bowman-Hicks 2, 15-7-12, set 8-inch 380 ft.

UNION PARISH—Price et al's Rigers 1, 25-23-2w, to set 6-inch 2120 ft. The Texas Co.'s Taylor 1, 2-22-2, fsh 3585 ft.

WEBSTER PARISH — Brothers Oil Co.'s Cox 1, 14-22-10, dr 1315 ft. Burkhalter et al's Burkhalter 1, 29-18-8, sd 2675 ft. Fortuna Oil Co.'s Baker 1, 35-23-11, dr 2000 ft. Henderson Synd.'s Pardee 1, 10-22-10, dr 1470 ft. Lloyd Harris' Pinewoods 4, 34-23-11, to set 6⅝-inch 2655 ft. Lucky 4 Oil Co.'s Baldwin 1, 28-18-10, sd 1600 ft. Oil Fields Gas Co.'s Camp 1, 25-23-10, dr 2400 ft. Rogers et

Amil A. Anderson
Petroleum Geologist
and
Mining Engineer
415 Foster Bldg., Denver, Colo.

VINSON, ELKINS & WOOD
ATTORNEYS
Gulf Building, Houston, Texas
Special Attention to Oil Leases and Litigation

PATENTS
Patents Obtained and Trade Marks and Copyrights Registered
OFFICE AT 709 KRESS BLDG.
HARDWAY & CATHEY
Phone Preston 4790 Houston, Tex.

Maurice Hirsch & Allen Hannay
ATTORNEYS AT LAW
601-2-3 Goggan Building
HOUSTON, TEXAS
Specializing in Oil Law and Land Law

PATENTS
Patents Obtained, Trade Marks, Patent Causes
JESSE R. STONE
Formerly Assistant Examiner United States Patent Office
Andrews, Streetman, Logue & Mobley, 12th Fl. Union N. Bk., Houston, Tex.

OIL FIELD EQUIPMENT

PIPE, PIPE, PIPE

We offer for immediate shipment 100,000 feet 2-in at 8 cents, 65,000 feet 2½-in at 10 cents, 50,000 feet 3-in at 15 cents, 12,000 feet 2½-in drill at 22 cents, 15,000 feet 3-in drill at 28 cents.

TEXAS SUPPLY COMPANY
2016 Loraine St. Houston, Texas

C. M. Heeter, Sons & Co., Inc., Butler, Pa.

Manufacturers of Improved Packers, Corrugated Friction Sockets, Swabs, Wire Line Pumping Outfits, Sand Pumps, Oil Savers, Pipe Grips, Spudding Wheels, Drilling Clamps, Flow Catchers.

Write for Catalog No. 5.

"First Exclusive Iron Dealers In Texas"

F. W. HEITMANN COMPANY

113 Main St., Houston, Texas

Gardner Steam Pumps
National Pipe, Boiler Tubes
Fittings, Valves, Packings
Beltings, Wire Rope
Drilling Cables, Bull Ropes

We carry a complete stock of the above commodities at all times and can ship immediately

al's Gardner 1, 6-22-10, ru. Smitherman et al's Waller 1, 28-23-11, wo 2690 ft. Snyder et al's Hodges 11, 15-21-10, dr 2205 ft. Moore 1, 13-19-8, dr 2190 ft. Sidney 1, 16-21-10, set 6-inch 2476 ft. J. K. Wadley's Pearce 1, 14-17-9, fsh 3350 ft.

Arkansas Wildcats

DRILLING REPORT

CALHOUN COUNTY—Calhoun Oil & Dev. Co.'s Hernsberger 1, 16-11-13, sd 2530 ft.

CHICOT COUNTY—Duncalf Oil Co.'s Feel 1, 12-19-2, sd 1165 ft. Hoffman Oil Co.'s Lloyle 1, 28-17-2, sd 1790 ft.

CLARK COUNTY—Arkansas Synd.'s Barringer 1, 26-10-20, sd 2845 ft. Casey et al's Sloan 1, 18-8-19, sd 900 ft. United Pet. Co.'s Langford 1, 28-5-23, sd 1590 ft.

COLUMBIA COUNTY—Bowdy et al's Fellenwider 1, 12-17-22, sd 1540 ft. Brown et al's Robinson 1, 23-18-23, sd 1725 ft. Compton et al's Dufer 1, 35-18-19, dr 710 ft. Cox et al's Davis 1, 14-18-21, sw 2100 ft, wo. Hosey et al's Haire 1, 30-19-8, sd 1810 ft. Russell et al's Rushton 1, 7-19-19, sd 2400 ft. Sharp & Strough's Brown 1, 26-18-20, sd 1146 ft. T. S. D. Co.'s Magal 1, 11-17-21, sd 3020 ft.

DREW COUNTY—Citizens Pet. Co.'s Hardy 1, 7-13-7, ru. Dunn Mar Pet. Corp.'s Hardy 1, 7-13-7, sd 1887 ft. Garrison et al's Smith 1, 26-13-5, tested sw 3083 ft. Graves et al's Coker 1, 22-11-7, sd. Holland et al's Doern 1, 9-12-4, wo 10-inch casing 1190 ft. Stainke et al's Fee 1, 23-13-7, sw 2031 ft.

GRANT COUNTY—Grant County Oil Co.'s Stupke 1, 15-5-12, sd 1210 ft. McGee et al's Cargile Lbr. Co.'s 1, 26-5-12, sd 700 ft. Parr Oil Co.'s Bretch 1, 31-4-11, dk.

HEMPSTEAD COUNTY—Georgia Oil Co.'s Duckett 1, 28-10-24, sd 965 ft. Hackathorne et al's Ellen 1, 33-11-26, wo 275 ft. Secrest et al's Duckett 1, 24-13-23, fsh 2245 ft. Tycap Oil Co.'s Mason 1, 7-11-25, testing 2369 ft.

LA FAYETTE COUNTY—Ken Saw Pet. Co.'s Fee 1, 31-19-24, sd 3240 ft. La Fayette Oil & Gas Co.'s Creek 1, 10-15-24, dk.

LINCOLN COUNTY — Lincoln Oil Co.'s Tutstone 1, 29-9-7, lcn.

LITTLE RIVER COUNTY—Sullivan Oil & Gas Co.'s Ludlow 2, 32-11-32, tested dry 1780 ft.

MILLER COUNTY—Dodwell et al's Miller Land & Lbr. Co.'s 1, 29-18-27, dr 2155 ft. Farmer Oil & Gas Co.'s Ramsey 1, 24-17-27, dk. Magnolia Petroleum Co.'s Westmoreland 1, 9-19-27, sd 3470 ft. Miller Land Co.'s Miller 1, 18-18-27, dk. Primero Oil Co.'s Bedgood 1, 2-16-28, sd 2180 ft.

NEVADA COUNTY—Bullock et al's Groves 1, 12-14-21, wo 1340 ft. Gleason et al's Williams 1, 12-14-20, dr 1375 ft. Gulf Ref. Co.'s Groves 1, 34-14-20, sd 2548 ft. Haskell et al's McKamie 1, 19-14-22, dk. Ken Saw Pet. Co.'s Brimberry 1, 21-13-21, dr 2815 ft. Nelson et al's Lester-Haltom 1, 4-15-20, wo 2426 ft. Shaw et al's Munn 1, 4-14-22, sd 400 ft. Tri County Oil Co.'s Drake 1, 3-15-20, abn 2325 ft. L. Watkins et al's Womack 1, 11-14-21, wo 1192 ft. White et al's Phillips 1, 30-14-20, wo 2178 ft.

OUACHITA COUNTY—Jimmie Cox Burton 1, 30-14-17, dr 1550 ft. El Dorado Union Oil Co.'s Lagrone 1, 36-15-17, dry 1946 ft, to deepen. Smackover Creek Oil Co.'s Moon 1, 32-15-17, sd 15 ft. Riley 1, 22-15-17, dk. Southern Oil Co.'s Patterson 1, 22-12-9, fsh 2895 ft. Young et al's Haire 1, 28-15-18, dk.

UNION COUNTY—Arkansas Invincible Oil Corp.'s McRae 1, 16-16-18, dk. Miler et al's McRae 1, 36-16-18, dk. Ohio Oil Co.'s Gordon 1, 16-16-17, set 8¼-inch 1836 ft.

Oklahoma Wildcats

COMPLETIONS

Company, Well, Location	Initial Production bbls.	Depth
Custer County—		
Parker Oil & Ref. Co. Ruth 1, C SE SW 1-15n-15w	*	4250
Washita County—		
Empire Gas & Fuel Co. Hamilton 1, SWc SE 25-1qn-14w	*	3500

For Sale

1—16" Cox Pipe Machine fitted with Landis Die Head.

1—12½" Cox Pipe Machine fitted with Landis Die Head.

1—1100 lb. Bement Miles Single Frame Steam Hammer.

Several Oil Country Lathes, Etc.

SPANG & COMPANY,
BUTLER, PA.

WIGGINS SUPPLY CO.

Dealers in New and Second-Hand
Oil, Gas and Water Well Supplies, Pipe and Oil Field Machinery
Beatty Building Houston, Texas

C. H. Smith, Pres. and Treas.
Mrs. J. B. Moore, Vice-Pres.
A. L. Eastham, Sec.

Beaumont Well Works Co.
Oil, Gas and Water Well Supplies
Cor. Laurel and Magnolia
Beaumont, Texas

ACREAGE AND PRODUCTION FOR SALE OR WANTED

BRAZORIA COUNTY OIL LEASES
10 acres northwest producing well at Stratton Ridge, close, $150.00. Commercial lease, $50.00 renewals. 5 to 25 acres southeast well $100.00 per acre fee. 1/64 royalty interest 212 acres 1 mile west northwest extension of Columbia field, $10.00 per acre.
F. S. PHILLIPS, Angleton, Texas

Announcing New Sectionized Texas County Maps, Scale 1 inch-1 mile
White Prints Cloth $5.00, paper $3.00
Humble, Gulf, Texas, Mid-Kansas, Prairie, Pure, Sinclair and Cosden Companies use our maps.
Every County in Texas
Orders in mail one hour after receipt of wire
TEXAS PETROLEUM BUREAU
P. O. Drawer 586 Ft. Worth, Tex.

TEXAS OIL MAPS
County and District
Catalog on Application
HEYDRICK MAPPING COMPANY
Wichita Falls, Texas

Oil Field and County Maps
Gulf Coast Country, Texas
Oil Field engineering and drafting to meet your individual requirements
JAMES GLEN
Oil Field Engineer
828 Cronicle Bldg. Phone Pres. 6260
HOUSTON, TEXAS

The FT. WORTH LABORATORIES

Field Gas Testing. Analyses of oil field brines, gas minerals and oil.
Sell Thermometers, Hydrometers and Laboratory Glassware
F. B. Porter, B. S., Ch. E., Pres.
R. H. Fash, B. S., Vice Pres.
828½ Monroe St., Ft. Worth, Tex.

F. W. Freeborn Engineering Corporation
Engineers, Appraisers, Constructors, Managers
For
Oil and Industrial Properties
MAYO BUILDING
TULSA, OKLAHOMA
Dallas, Texas — Slaughter Building
New York City — 52 Wall Street
Boston, Mass. — 50 Congress Street

MAPS
New Kosse map, also $1000 worth of new data for our Gulf Coast oil field maps, which makes them the best obtainable. County and topographic maps.
ROCK MAP CO.,
1112 Preston Ave., Houston, Texas

DRILLING REPORT

ATOKA COUNTY—J. F. Torrence et al fee 1, SWc, NE NE 1-2s-9e, dr 1175 ft.

BECKHAM COUNTY—Radio Oil Co. 1, NEc 29-11n-27w, rig. J. M. Simpson 1, SEc NW NW 35-10n-23w, lcn. Stratton & Bell 1, C NW NW 6-9n-24w, tools moved in. Wilson et al 1, SWc 18-9n-24w, lcn. E. L. Martin et al 1, NEc SE NW 31-9n-23w, dr 400 ft. Beckham County Oil Co. 1, NEc SE SW NW 35-9j-23w, 1100 ft. Bell & Stratton Smith 1, C NW NW 6-9n-22w, timbers. Sutherland et al Graves 1, SWc NE NW 8-8n-26w, dr 2540 ft. A. A. Small 1, SWc NE 4-8n-24w, dr 270 ft. Rubana Oil Co. 1, SWc NW NE 22-8n-23w, rig. Neff et al Baker 1, NWc SE 24-8n-23w, dr 300 ft.

BLAINE COUNTY—Thompson et al Dickerman 1, SEc 26-15n-12w, dr 2260 ft.

CANADIAN COUNTY—Chase Oil & Gas Co. Dawson 1, NEc 34-15-9, dr 1850 ft.

CLEVELAND COUNTY—Garr Oil Co. Holland 1, NEc SE 31-16-4, dr 1670 ft.

CUSTER COUNTY—Ralph Day Miller 1, SWc SE 21-14n-17w, dr 2700 ft.

DEWEY COUNTY—Beard O. & G. Co. Ball 1, NEc NW NE 34-26n-10w, fsh 2535 ft.

GRADY COUNTY—Harry Cubon Taylor 1, C NW SE 7-8n-8w, lcn. Leemaster Bros. Wolverton 1, NWc 9-6n-8w, fsh 890 ft. Nichols Drilling Co. Holoway 1, SEc SW 11-6n-8w, rig. Hagerling et al Vaughn 1, C NE SW 34-6n-6w, lcn. Langston O. & G. Co. Cook 1, NWc SW 19-6n-5w, rig up. Haywood Oil Co. Clay 1, SWc NE SW SE 15-5n-7w, fishing cas 2225 ft. Arrasmith et al Nail 1, NEc 17-5n-7w, rigged up. McBee et al Thomas 1, SWc SE SW NE 19-5n-7w, dr 1350 ft. Ware-Hawk-Ball Oil Co. Morris 1, C NW NW 31-4n-8w, dr 150 ft. Nalson Bros. Newell 1, C NW SE NW 1-4s-8w, dr 200 ft. Mummert et al Lunsford 1, C NE SE NW 1-4n-8w, sd 1625 ft. Caudill Bros. Taylor 1, C SE SE 2-4n-8w, dr 1140 ft. Empire Gas & Fuel Co. Dryden 1, C SE NW 2-4b-8w, dr 300 ft. New Moon Oil Co. Dickerson 1, C NW SW NE 11-4n-8w, rig. Sun Ray Oil Co. Pettit 1, C E L W½ NW SE 12-4n-8w, dr 1590 ft. Ellis et al Cox 1, C SE NW NE 32-4n-8w, rig. Muse et al Williams 1, NEc 24-4n-8w, dr 620 ft. Sykes et al Underwood 1, C NW NE 32-4n-8w, dr 1965 ft. Caudill Bros. Martin 1, SWc SE NW 36-4n-8w, dr 1160 ft. Marland Ref. Co. Case 1, NEc SE 17-4n-6w, lcn. Ship et al Purdly 1, C SW NW 18-4n-6w, ur 720 ft. Forrester et al Findley 1, NWc NE 5-3n-7w, rig. Hagerling et al Pettit 1, C W L E½ SE NE 11-3n-7w, lcn. Crew et al Pickens 1, C NE NE NE 23-5n-6w, lcn.

GRAND COUNTY—Comar Oil Co. Smalley 1, SEc NW SE 13-25n-4w, setting 5-inch casing 2225 ft. National Ref. Co. et al Rogers 1, NEc NE NW 15-27n-4w, dr 650 ft.

JEFFERSON COUNTY—Empire Gas & Fuel Co. Price 1, C NW SW NE 23-3s-7w, fsh 2585 ft. Levine et al Wailine 1, C N L NW 25-4s-6w, timbers. Shawver & Sutton Anderson 1, SEc NE 31-4s-8w, dr 600 ft.

LINCOLN COUNTY—Plateau Oil Co. Keller 1, SEc 28-17-3, dr 2650 ft. Magnolia Pet. Co. Payne 2, SWc NW SE NE 6-17-4, dr 1740 ft. Sartin Bros. Hobson 1, SWc 16-16-4, fsh 380 ft. D. F. Flynn et al McKeown 1, SEc NW 14-16-5, fsh 1900 ft. Mascho et al Wyman 1, SEc SEc SW 36-15-2, sd 1765 ft. Mutual Oil Co. Powell 1, SEc NW NW 17-15-5, fsh 1790 ft Jonhahl et al Hubbard 1, SEc SW 15-15-6, dr 410 ft.

LOVE COUNTY—Cook Oil Co. LaFlore 1, C NE NW NE 13-6s-1e, dr 1400 ft. Driller Synd. Wilson 1, NWc NE 11-7s-2e, dr 1580 ft.

McCLAIN COUNTY—Marian et al Wantland 1, C NE 1-5s-2e, fsh 2690 ft.

McCURTAIN COUNTY—Fred Ptak Wilson 1, NWc SE 15-8s-25e, dr 3370 ft.

OKLAHOMA COUNTY—Firestone Oil Co. school land 1, NWc SE 36-11n-3w, ur for 10-inch casing, td 1850 ft.

PONTOTOC COUNTY—Craig et al Starrett 1, NWc NE 5-4-5, dr 1200 ft.

ROGER MILLS COUNTY—Trio Oil Co. SEc NW NW 3-13-262, dr 1240 ft.

SEMINOLE COUNTY—Tidal Osage Oil Co. Henry 1, SEc NW NE 22-9-6, dr 3440 ft; Dunson 1, NWc 3-9-8, dr 1975 ft.

TILLMAN COUNTY—Luffborough et al Dickey 1, NEc NW NE 7-4-15, fsh 1480 ft.

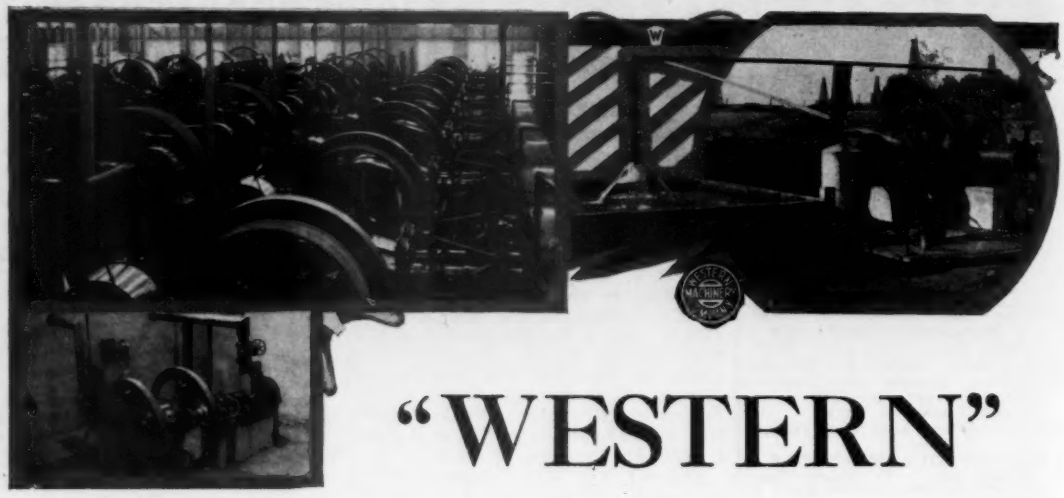
WASHITA COUNTY—Rita Oil Co. Joyce 1, NEc SW SW 21-11-10, dr 4725 ft.

FOR LEASE—Lands in new oil field of Angelina County, Texas. Commercial or drilling. Two wells now producing several barrels less than 600 feet. Several wells starting early in the new year. Ready market for oil at $2.50 per barrel. Quick revenue producers. Good prospects for deeper oil. If interested write or wire Geo. H. Henderson, Keltys, Angelina County, Texas.

Corporations Financed
We furnish capital to established corporations that have demonstrated their earning capacity and need capital for expansion or reorganization. This we do through the sale of securities. Replies confidential.
1215 Commonwealth Trust Building
Philadelphia, Pa.

SWAN UNDERREAMERS

"No Fishing Jobs"
AT YOUR SUPPLY STORE
Made By BRIDGEPORT WICHITA



"WESTERN"

One of the first completely successful internal combustion engines built exclusively for oil country service was the "Western." The first "Western" Engine used in this service made good and since that time other "Westerns" have improved that record, always keeping well apace with the conditions and requirements of progressive oil field operations.

Today many of the leading oil companies are standardizing on "Western" Engines, and many others are using them more and more as they experience or come in contact with their splendid performance under all service conditions.

"Western" efficiency, operating economy and dependability are something more than claims. Hundreds of these engines are operating in various oil fields of the world, and have been for many years, so that their worth is a matter of definite record, open to any organization or individual interested.

We shall be glad to furnish such records promptly on request, together with photographs of installations, charts, etc.

"Western" Oil Field Engines and Reverse Gear
25-40 H. P. Single Cylinder Units

"Western" Gas and Gasoline Engines, 80-320 H. P. Two and Four Cylinder Units

Please Mention Catalog No. 5 When Writing

WESTERN MACHINERY COMPANY

GENERAL OFFICES & FACTORY · 905 NORTH MAIN STREET
LOS ANGELES, CALIFORNIA, U.S.A.

Say you saw it in The Oil Weekly

NEW EQUIPMENT, CATALOGS, BULLETINS, BOOKS

Welded Pipe for River Crossing Is Successful

For river crossings, the welded pipe line is proving more durable than the old method of laying coupled pipe on river beds with heavy clamp. Welded pipe does not prove as susceptible to the continuous flow of a stream as does coupled pipe.

When laid on the bed of a river with clamps, coupled pipe is often suspended through sand being washed from under the line. In such instances, the continuous cutting of sand frequently results in a broken joint under the water.

The welded joint for river crossing has been tried several times by the Prairie Pipe Line Company. So far this concern never has had a break in one of these crossing. The welded line is laid without heavy clamps. The resistance is supposed to come through the strength the welded joint has over the coupled joint.

In laying a welded line across a stream, the pipe, usually an extra heavy product of more than 40 pounds to the foot, is welded on one bank of the stream. Then the trench is dug up to the edge of the water. The heavy welded pipe is placed in this and the end plugged.

Across the stream, a joint of pipe is rigged up as a windlass. A wire line is extended from this windlass across the stream to the end of the welded line. Then the windlass is turned and the line drawn across the stream.

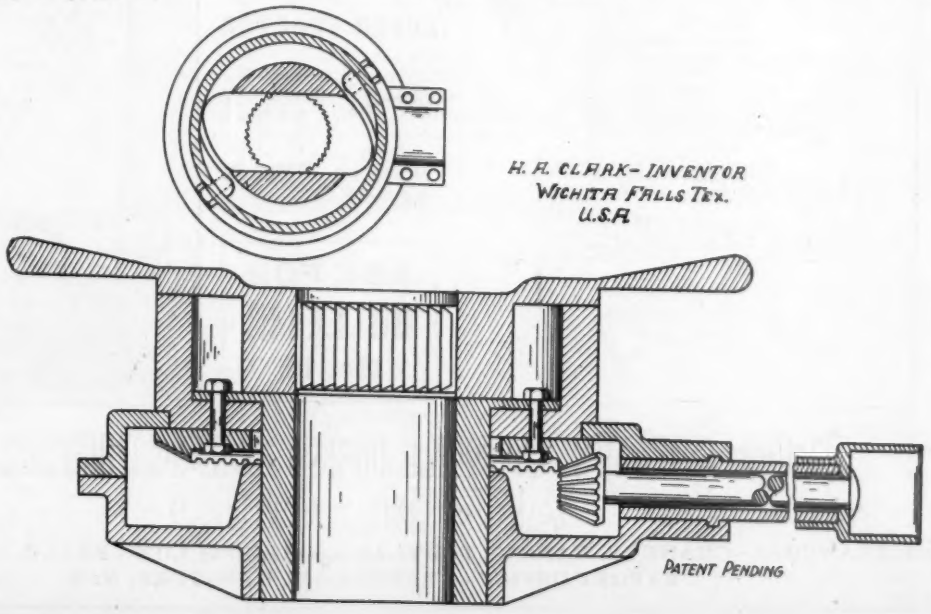
After it is properly adjusted, fire bands are built at proper places on each side, heating the pipe and allowing it to bend to conform to the bed of the stream. Then the welded line is connected at either end of the special pipe for the crossing.

New Apparatus Reduces Cost and Saves Time in Screwing and Unscrewing Pipe

Wichita Falls, Texas, Jan. 15.— A mechanical apparatus has been patented by H. A. Clark of the Clark Machine Company of this city that is especially adapted to screwing and unscrewing pipe, tubing and rods on oil wells and can be attached to cleanout or spudding machines, or any machine that has a continuous revolving shaft. It is simple in construction, and serves in the place of hand wrenches and tongs at the same time affording greater speed than the present methods generally in use in pulling rods and tubing. The disadvantage experienced by workmen on the derrick floor from splashing fluid when unscrewing pipe or tubing is eliminated by this machine since they can stand off at a distant after the power has been applied and the dogs or wedges (2) have forced the notched teeth of the jaws (1) in contact with the object to be screwed on or off.

The device comprises two clamping jaws (1), which are provided with notched teeth to hold an object while being turned, (2) is taperer dogs or wedges with outer surface rounded to conform with the upper houseing (3) to which they are attached with cap screws (4), while (5) is a houseing or frame retaining the clamping jaws (1), (6) is handles forming a part of the houseing (5), (7) is the outer houseing supporting the upper houseing (3), (8) is a flanged bushing supported by the upper houseing (3), (9) is a ring gear bolted to the upper houseing (3) and the flanged bushing (8) as illustrated at (10), (11) is the lower houseing and (12) is the drive shaft. The pinion gear (13) is attached to the drive shaft (12) and associated with the ring gear (9), while (14) is a drive shaft houseing provided with a flange (15) forming a part of the drive shaft houseing (14), said flange (15) is associated with a grove in the outer houseing (7) and the lower houseing (11) to hold the drive shaft houseing in place. (16) is a power receiving socket attached to the drive shaft (12) and extending over the end of the drive shaft houseing (14).

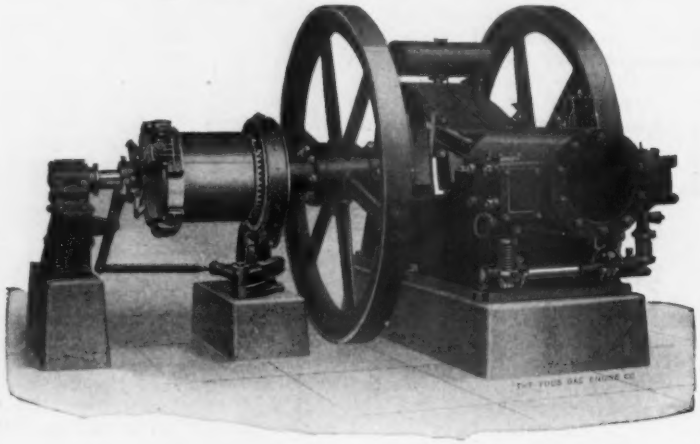
By applying the power to the power receiving socket (16), which is connected with the pinion gear (13) that is in mesh with ring gear (9), the upper houseing (3) together with the flanged bushing (8) and the houseing or frame (5) retaining the clamping jaws (1) will revolve in any direction desired in cooperation with the direction of the power applied, to either screw two objects together or unscrew them.



THE FOOS

BUILT ESPECIALLY FOR OILFIELD SERVICE COMBINING THE HIGHEST QUALITY MATERIALS OBTAINABLE WITH 35 YEARS EXCLUSIVE ENGINE BUILDING EXPERIENCE.

Type OK—25—35—50 H. P.



Fully described in Bulletin No. 90—Send for your copy.

THE FOOS GAS ENGINE CO.

Springfield, Ohio

Also Manufacturers of The Foos
Vertical 65 to 325 H. P.
Horizontal Type 8 to 90 H. P.
2½ and 6 H. P. Combined Pumpers

ADEQUATE STOCK OF REPAIRS CARRIED IN ALL THE PRINCIPAL FIELDS

VOGT BROTHERS

PETROLEUM

BRUIN, PA.
Oct. 7, 1922.

Star Drilling Mch. Co.,
Akron, Ohio.

Gentlemen:

We have had our Star No. 38-ST Super-tractor in use about six months and are glad to say that it has given satisfaction in every way.

All of our work has been cleaning out oil wells, except two Speechley gas wells which were over 2300 feet deep, and we can say that the machine did the work nicely and in record time.

We have tested the Super-tractor attachment in moving up mountains, over creeks and up steep hills, and find it will climb any hill or mountain in this vicinity.

We are very well satisfied with the results the No. 38-ST Super-tractor has given us, and you can feel safe in recommending it to anyone who needs a machine for this class of work.

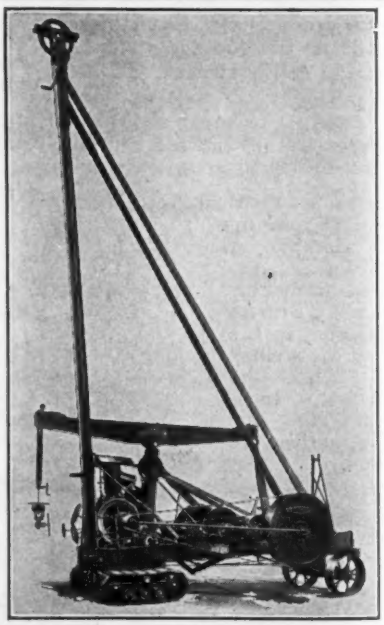
Yours truly,
Vogt Brothers
Per C. J. Vogt.

THE STAR No.38-St. SUPER-TRACTOR

READ WHAT IT DOES

SEE HOW IT LOOKS

ASK FOR BULLETIN No. 12



THE STAR DRILLING MACHINE CO.
AKRON, OHIO

BRANCHES—CHANUTE, KANSAS; PORTLAND, OREGON; LONG BEACH, CALIFORNIA
EXPORT OFFICE—2 RECTOR ST., NEW YORK, N. Y.

Say you saw it in The Oil Weekly

PERSONAL MENTION-MEN YOU KNOW

F. W. DeLuce, formerly with the Oil Well Supply Company, now is connected with the sales organization of the Murray Tool and Supply Company of Tulsa.

A. C. Bedford of the New Jersey Standard will vacation this winter at the Huntington Hotel in Pasadena, California. He is due to arrive at the hotel early in February, in company with several friends.

H. C. Fownes, head of the Standard Seamless Tube Company of Pittsburgh, is in California looking over the fields, and lining up business.

W. C. (Screener Bill) Rae of the Trumble Gas Trap Company of Los Angeles is getting primed for a swing around the circle of oil states —Texas, Oklahoma, etc.—to see if the myriads of Trumble traps he has in these fields are all working satisfactorily.

J. A. Rowe of the National Petroleum Company with a refinery at Mexia, Texas, is visiting his relatives in Los Angeles and looking over the California fields.

L. L. Childs, president of the Improved Rotary Bit Company, Shreveport, manufacturers of the Stokes Collapsible Bit, was in Houston on business this week. Mr. Childs is well known in the supply business, having been with some of the best known manufacturing and supply companies in the Southwest for the past several years.

Henry H. Brigham, president of the North American Car Company, spent part of last week in Tulsa. He made a stop at Coffeyville, Kansas to look over company property there before returning to headquarters at Chicago.

H. A. Glenn, formerly chief clerk for the Gulf Production Company in the North and Central West Texas district with headquarters at Fort Worth, has resigned to accept a similar position with the Texhoma Oil and Refining Company at Wichita Falls.

Charles T. Butler, formerly in the legal department of The Texas Company, New York, resigned his position with that company and is now located in Los Angeles, where he is engaged in legal work.

R. M. YOUNG

As vice president and general manager of the Western Division of the Carter Oil Company, Mr. Young directs the activity of his company in the Mid-Continent and Rocky Mountain districts

E. V. Green of Muskogee, sales manager of the Muskogee Tool Company, called on the trade in Tulsa last week.

Lee V. McAnelly, representative of the Rosendale-Reddaway Belting and Hose Company with offices in Dallas, Texas, is in Tulsa this week.

Thomas R. Lott, assistant general superintendent of the Prairie Pipe Line Company in Texas, with headquarters in Eastland, was in Tulsa last week visisting other officials of the company.

J. K. Cleary in charge of the Tulsa office of the Marland companies, has returned from a visit of three weeks to New York and other eastern cities.

Mel Shugert, superintendent in charge of all producing properties of the Sinclair Oil and Gas Company in Texas, Louisiana and Arkansas, is confined at his home in Fort Worth with a bad attack of influenza.

J. E. O'Connell, scout for the Sinclair Oil and Gas Company in the Central West Texas fields, has returned to his headquarters in Breckenridge after spending the holidays with the home folks back in the East.

W. E. Campbell, sales manager of the Panhandle Refining Company, and Palmer Hughes, sales manager of the Clayton Oil and Refining Company, both of Dallas, were among the Texas representatives in Tulsa for the meeting of the Western Petroleum Refiners' Association January 10.

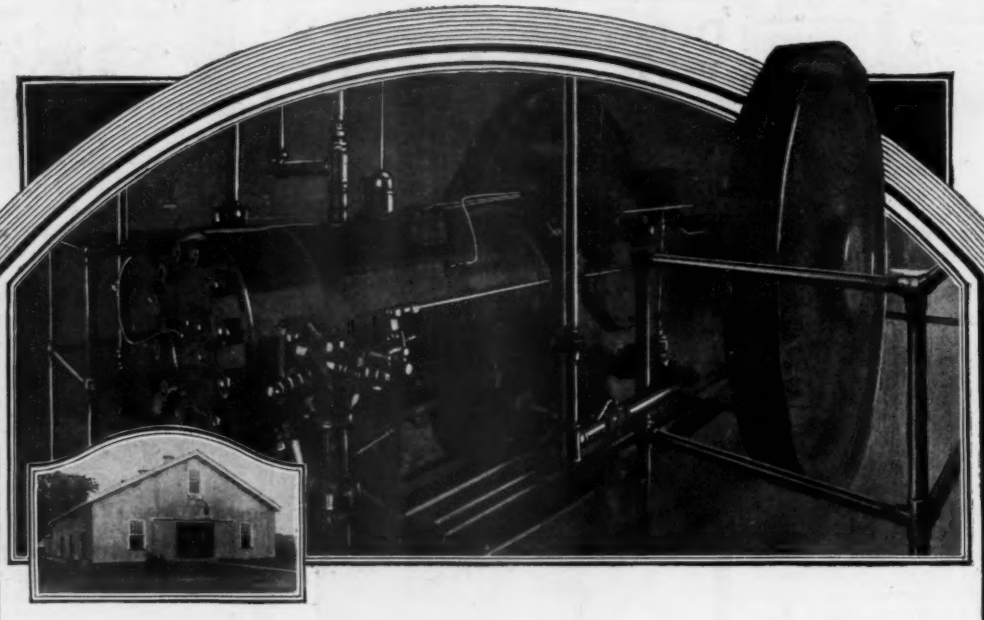
H. T. Ashton of the Lubrite Refining Company of St. Louis was a Tulsa visitor last week.

Willard Foster, president of the Tulsa Oxy-Hydro Company, is now in New York attending the convention of the Compressed Gas Manufacturers of America. Previously he attended the meeting of the Gas Producers Association in Chicago.

A. M. Day, sales manager of the Oklahoma Tool and Supply Company, was away from his Tulsa office a part of last week on account of illness.

L. E. Phillips of the Phillips Petroleum Company at Bartlesville, was a Tulsa visitor last week.

E. F. Bergolte of the Kansas City office of the Acme Petroleum Company was a visitor in Tulsa last week.



Yes, they stand the gaff of service—

THERE are no "weak sisters" in the Bessemer line. Each model offered you and each engine shipped is designed and built for steady use without interruptions.

For example, we furnished The Gypsy Oil Company with a 50 H.P. Bessemer Gas Engine back in 1917. It was promptly put into service and, (just to prove Bessemer quality in good, convincing fashion) *went through its whole fifth year without a stop!* And even then it only stopped because the gas supply was shut off.

Breaking the world's record non-stop run doesn't mean that this engine was an extra good Bessemer—it merely means that the owners happened to realize its good performance and told us about it.

Nevertheless, facts like this are mighty reassuring to any prospective buyer of oil field equipment.

Mention your need and we will be glad to forward the proper catalog.

THE BESSEMER GAS ENGINE COMPANY
62 York Street Grove City, Pa.

BESSEMER

BESSEMER OIL FIELD ENGINES – COMPRESSORS VACUUM PUMPS – ROLLER PUMPING POWERS

Service Branches in Chief Production Centers

SQUEAKS from the BULL WHEEL

Ain't It So?

"The oil scout has an easy job,"
The office force all say.
"He rides around, and takes his ease,
"Comes in and draws his pay.

"He doesn't have to punch the clock,
"His meals go on expense,
"His home is where his jitney is,
"He has to pay no rents.

"I'd like to be an oil scout, too,"
The office force surmise,
And rest back in their easy chairs,
And spend time killing flies.

"The office guys have got the graft,"
The oil scout will declare,
"They never have to 'dig 'er out,'
"Or make their own repair.

"They never have to dodge the dogs,
"The farmers keep around,
"They spend their time in joy and ease,
"And never leave the town.

"This scouting job is no man's cinch,
"Those office birds should know."
And drawing to a bobtailed flush
He spends a day or so.

A friend in Louisiana sends us this one and remarks that the recent account of the Boll Weevil's experience as an oil inspector in that state is remarkably true to life:

"A colored preacher anonunced to his congregation the following subject: Brethren and sistern, I'se gwine to preach a powahful sermon dis mornin'. I'se gwine to define the undefinable; I'se gwine to explain the unexplainable, and I'se gwine to unscrew the unscrutable."

The sky was blue—and I was, too,
Standing on the brink;
The hole was dry!—and so was I,
Nary a drop to drink.

One hole dry means another try,
So why seek an excuse;
For men must dig like a tough-nosed pig,
Would he rise above the deuce.

—J. S. McMillan in the Tulsa World.

Old But Clever

A real estate agent was offered sixty dollars, less two and a half per cent discount for cash, for an option on a piece of property. Being a poor mathematician and wishing to conceal his ignorance of arithmetic from his customer, he excused himself for a minute and sought his new stenographer.

"Good morning, Miss Colgate," he said, with his most expensive smile. "Nice weather we're having, ain't it? Now tell me, if I were to give you sixty dollars, less two and a half per cent discount for cash, how much would you take off?"

Instead of figuring it out, the young lady promptly put on her hat and coat and went home, saying she had been insulted. Darned if we can see what there was to get insulted about. If she couldn't figure it out, why didn't she say so and let it go at that.—Back Fires.

It was the dear old lady's first ride in a taxi, and she watched with growing alarm the driver continually putting his hand outside the car as a signal to following traffic. At last she became exasperated.

"Young man," she said, "you look after that car of yourn and watch where you are going. I'll tell you when it starts raining."

Hurry Back News.

When intercepted as they were buying tickets for Dallas, Texas, two Wichita, Kansas, lads, 10 and 11 years of age, said they were going to the Lone Star State to "punch an oil well."

Their capital consisted of $1400, taken from a Wichita bank, which they entered through an unlocked door, finding the money in an open cash box.

The Okmulgee District Oil and Gas Association is going to tell the world by radio. The organization has made arrangements to broadcast the development of the oil fields of that part of Oklahoma through the ether twice each week.

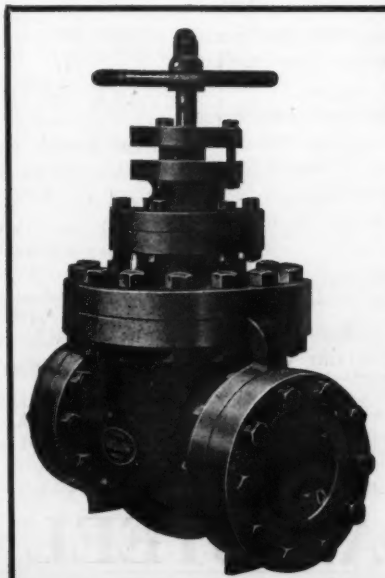
She (critically)—I never could see much in these crepe de chine dresses.

He (also a critic)—Ah, my dear, but you never look at them in the right light.—Pure Oil News.

Conversation overheard in "Little Mexico", the Mexican and negro section of Mexia:

"What do you think ought to be done with a fellow who commits suicide?" a drilling contractor asked a negro preacher.

"Yassah, Ah thinks that a man dat does a thing like dat ort to be made to take de child and raise it," was the reply.



When You Need VALVES

remember that LUDLOW DOUBLE GATE VALVES have been giving satisfactory service since 1866.

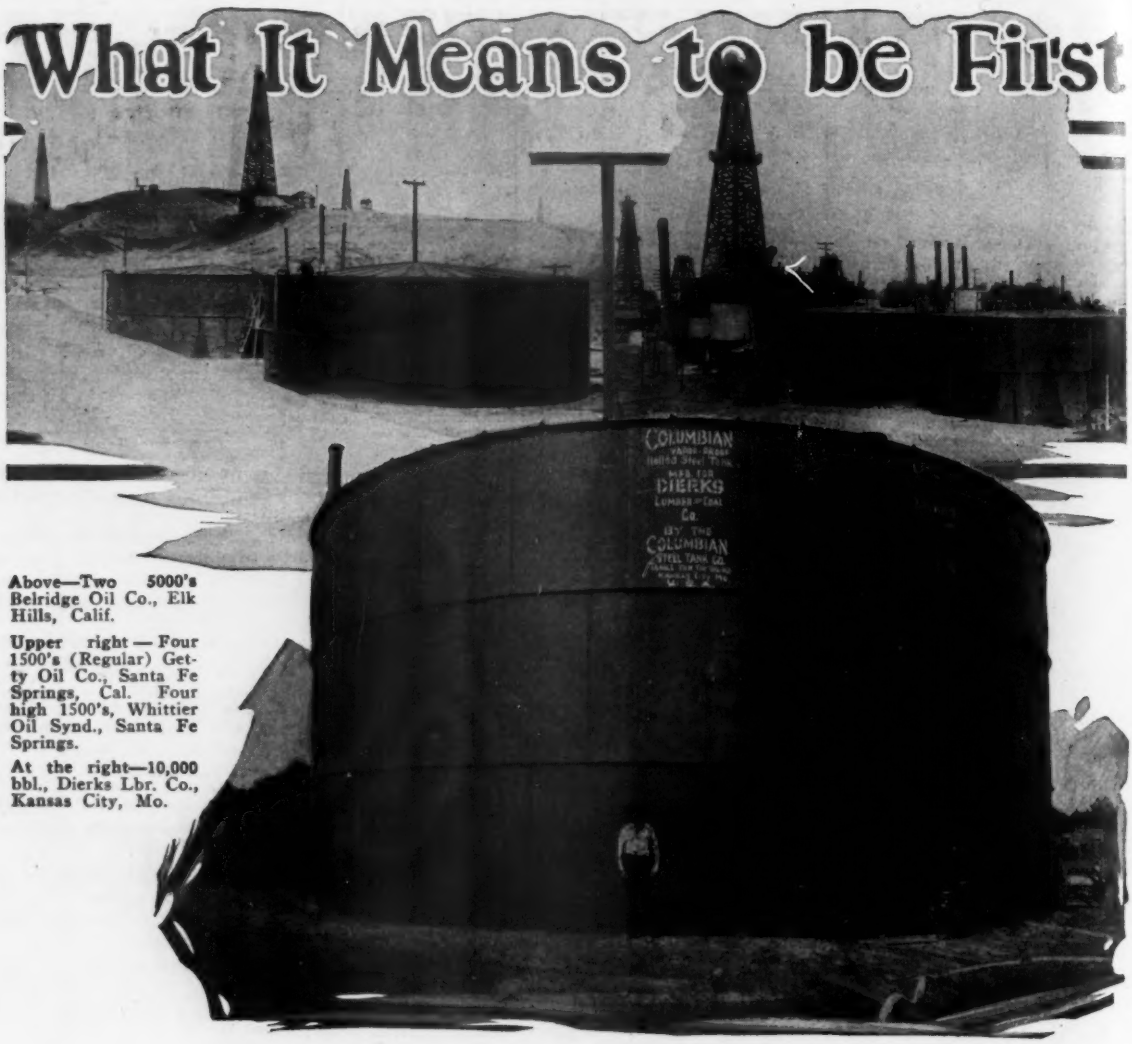
If you are not already using these efficient valves it will pay you to write us for prices and particulars.

THE LUDLOW VALVE MFG. COMPANY

(Established 1866)

Branch Offices:
Kansas City, Mo.; Chicago, Ill.; Pittsburgh, Pa.; Boston, Mass.
Factory: Troy, New York

What It Means to be First



Above—Two 5000's Belridge Oil Co., Elk Hills, Calif.

Upper right — Four 1500's (Regular) Getty Oil Co., Santa Fe Springs, Cal. Four high 1500's, Whittier Oil Synd., Santa Fe Springs.

At the right—10,000 bbl., Dierks Lbr. Co., Kansas City, Mo.

Is is easy to follow the path that has been broken. But breaking the path is the hardest job in the world.

The keen eye of the Oil Industry has been quick to appreciate this greatest service. It grasped at once the tremendous value of

—the first bolted tank above 1000 barrels
—the first 5,000-barrel bolted tank;
—and the first "10-Thousand."

The first of every one of these was a Columbian Portable Bolted Steel Tank.

So far as we know, no other manufacturer has dared the monumental feat of erecting a 10,000-barrel portable bolted steel tank.

The photograph above shows a Columbian "10-Thousand" storing fuel oil for the Dierks Lumber Company of Kansas City. Two other Columbian "10-Thousands" are storing crude for the Belridge Oil Company, Elk Hills, Kern County, California.

As to the "5-Thousands," there are 30 Columbians to one of all other makes combined. More than 40,000 Columbian Portable Bolted Steel Tanks—65 to 10,000 barrels—have been erected in all the fields of the world.

And now the otherwise tremendous losses by evaporation are eliminated by the famous Columbian Vapor-Proof Deck. Protected against dangerous pressure and vacuum by an absolutely automatic relief valve. Simple, efficient, safe. Operates without human attention.

Columbian Vapor-Proof Bolted Steel Tanks—first in construction, first in service—are first in every field. And an alert, efficient dealer-erector in every field who carries all sizes in stock, is ready to start erection day or night. Better get in touch with him today.

COLUMBIAN STEEL TANK CO.

1411 West 12th St., Kansas City, U. S. A.

Say you saw it in The Oil Weekly

GUIDE FOR PURCHASERS

Air Lift Pumping Equipment
Gardner Governor Co.
Ingersoll-Rand Co.
Sullivan MachineryCo.

Attorneys
Hirsch & Hannay
Vinson, Elkins & Wood

Agitators
Chicago Bridge & Iron Works

Balls and Seats
The Charles N. Hough Mfg. Co.

Banks
Exchange Banks of Tulsa
First National Bank of Tulsa

Belting
Atlas Supply Co.
Bridgeport Machine Co.
D. F. Connolly Agency.
Frick-Reid Supply Co.
Lucey Mfg. Corp.
Norris Bros.
Oil Well Supply Co.
The National Supply Cos.

Boilers
Atlas Supply Co.
Bridgeport Machine Co.
The Brownell Co.
D. F. Connolly Agency.
Frick-Reid Supply Co.
The National Supply Cos.
Oil Well Supply Co.
Oklahoma Tool & Sup. Co.
Texas Supply Co.
Titusville Iron Works Co.
Tulsa Boiler & Sheet Iron Wks.
United Iron Works, Inc.
See Oil Well Supplies & Tanks

Bolt Machines
Williams Tool Corporation

Burners
Gaso Pump & Burner Mfg. Co.
Norris Bros.

Bull Wheels
International Derrick & Equipment Co.

Casing Shoes
Bridgeport Machine Co.
Gulf Coast Machine & Sup. Co.
The National Supply Cos.
Pelican Well Tool & Supply Co.

Compressors
Atlas Supply Co.
Butler Mfg. Co.
Clark Bros. Co.
Gardner Governor Co.
F. W. Heitmann Co.
Hope Engineering Co.
Ingersoll-Rand Co.
Sullivan Machinery Co.
United Iron Works, Inc.

Cordage
D. F. Connolly Agency.
The National Supply Cos.

Couplings
Harrisburg Pipe & Pipe Bending Co.

Crown Blocks
American Well & Pros. Co.
Boykin Machinery & Supply Co.
Continental Supply Co.
Gulf Coast Machine & Sup. Co.
International Derrick & Equipment Co.
Lucey Manufacturing Corp.
Lufkin Foundry & Machine Co.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.

Dehydrating Processes
W. S. Barnickel & Co.
De Laval Separator Co.
Petroleum Rectifying Co.

Derricks and Rigs
International Derrick & Equipment Co.
Lee C. Moore & Co.
Parkersburg Rig & Reel Co.
Peden Iron & Steel Co.
Superior Tube Co.

Diamond Core Drills
Sullivan Machinery Co.

Ditchers
Buckeye Traction Ditcher Co.

Draw Works
American Well & Pros. Co.
Boykin Machinery & Sup. Co.
Lufkin Foundry & Machine Co.

Drilling Cables
Bridgeport Machine Co.
D. F. Connolly Agency.
Frick-Reid Supply Co.
F. W. Heitmann Co.
The National Supply Cos.
Peden Iron & Steel Co.
Williamsport Wire Rope Dist. Co.

Drilling Machines
Bridgeport Machine Co.
Parkersburg Rig & Reel Co.
Star Drilling Mch. Co.

Drill Pipe
Reading Iron Co.
Standard Seamless Tube Co.
Texas Supply Co.

Drilling Equipment
American Well & Pros. Co.
Bridgeport Machine Co.
Union Tool Co.

Drive Pipe
Reading Iron Co.

Electrical Equipment
Enameled Metals Co.
Southwest Gen. Elec. Co.
Westinghouse Elec. & Mfg. Co.

Elevators
Bridgeport Machine Co.
Dunn Manufacturing Co.
Gulf Coast Machine & Sup. Co.
Norris Bros.
Wilson & Willard Mfg. Co.

Engineers
Samuel T. Caudill
F. W. Freeborn Eng. Co.
James Glenn
Geo. C. Matson
Lee C. Moore & Co.

Engines, Diesel
Western Machinery Co.

Engines, Gas
Atlas Supply Co.
Foos Gas Engine Co.
Western Machinery Co.

Engines, Oil
Atlas Supply Co.
Western Machinery Co.

Engines, Pumping
Western Machinery Co.

Engines
Ajax Iron Works
American Well & Pros. Co.
Atlas Supply Co.
Bessemer Gas Engine Co.
Bridgeport Machine Co.
The Brownell Co.
Clark Bros. Co.
Continental Supply Co.
De La Vergne Machine Co.
Foos Gas Engine Co.
Franklin Valveless Engine Co.
Frick-Reid Supply Co.
Hope Engineering Co.
Ingersoll-Rand Co.
Lucey Manufacturing Corp.
Lufkin Foundry & Machine Co.
The National Supply Cos.
National Transit Pump & Machine Co.
Oil Well Supply Co.
Peden Iron & Steel Co.
Southern Engine & Pump Co.
Titusville Iron Works Co.

Fish Tail Bits
American Well & Pros. Co.
Gulf Coast Machine & Sup. Co.
Pelican Well Tool & Sup. Co.
W. K. M. Company

Floor Circle Brace
Dunn Manufacturing Co.

Fuel Oil
Empire Refineries
Gulf Refining Company
Sinclair Refining Company
White Oil Corporation

Gasoline Extraction Compressors
Bessemer Gas Engine Co.
Clark Bros. Co.
Gardner Governor Co.
Ingersoll-Rand Co.
Sullivan Machinery Co.

Gasoline and Oil Storage Tanks
Butler Mfg. Co.
Chicago Bridge & Iron Works
Kansas City Struct. Steel Co.
Parkersburg Rig & Reel Co.

Gas Traps
Trumble Gas Trap Co.

Gauges
The Foxboro Co., Inc.

Geologists
A. A. Anderson
Samuel J. Caudill
James L. Darnell
Alexander Deussen
O. H. Eichelberger
Dorsey Hager
Robert T. Hill
Edwin B. Hopkins
Geo. C. Matson

Gauge Boards
The Foxboro Co., Inc.

Genuine Wrought Iron Casing
Reading Iron Co.

Grips and Clamps
Norris Bros.

Hose
D. F. Connolly Agency.
B. F. Goodrich Rubber Co.

Laboratory Equipment
Fort Worth Laboratories

Lighting Systems
Bridgeport Machine Co.
Lucey Manufacturing Corp.
Westinghouse Elec. & Mfg. Co.

Line Pipe
Reading Iron Co.

Maps
James Glen
Rock Map Co.

Meters
The Foxboro Co., Inc.

Motors
Southwest General Electric Co.

Oil Conservation
The Petroleum Safety Appliance Co.

Oil Field Supplies
American Well & Pros. Co.
Atlas Supply Co.
Boykin Machinery & Sup. Co.
Bridgeport Machine Co.
Butler Mfg. Co.
D. F. Connolly Agency.
Continental Supply Co.
Frick-Reid Supply Co.
Gulf Coast Mach. & Sup. Co.
Gardner Governor Co.
B. F. Goodrich Rubber Co.
Kansas City Struct. Steel Co.
The Kelly & Jones Co.
Lucey Manufacturing Corp.
Lee C. Moore & Co.
The National Supply Cos.
Norris Bros.
Oil Well Supply Co.
Oklahoma Tool & Supply Co.
Parkersburg Rig & Reel Co.
Peden Iron & Steel Co.
Pelican Well Tool & Sup. Co.
Southern Brass Mfg. Co.
Texas Supply Co.
United Iron Works, Inc.
Union Tool Co.
Western Supply Company.

Oil Producers
Standard Oil Co. of N. J.

Packers
The Guiberson Corporation
Layne & Bowler
Pelican Well Tool & Sup. Co.

Packing
D. F. Connolly Agency.
B. F. Goodrich Rubber Co.
Lucey Manufacturing Corp.
The National Supply Cos.
Oil Well Supply Co.
Peden Iron & Steel Co.
Pelican Well Tool & Sup. Co.

Paints
Peden Iron & Steel Co.

Patents
Hardway & Cathey
Jesse R. Stone

Pipe Grips
Norris Bros.

GUIDE FOR PURCHASERS—Continued

Pipe
Atlas Supply Co.
Continental Supply Co.
Frick-Reid Supply Co.
F. W. Heitmann Co.
Harrisburg Pipe & Pipe Bending Co.
Interstate Pipe Co.
Lucey Manufacturing Co.
The National Supply Cos.
Oil Well Supply Co.
Peden Iron & Steel Co.
Reading Iron Co.
Standard Seamless Tube Co.
Texas Supply Co.
Williamsport Wire Rope Co.

Pipe Machines
Williams Tool Corporation

Pipe Screwing Machines
Buckeye Traction Ditcher Co.

Pipe Threading Machines
Williams Tool Corporation

Pipe Threading
Williams Tool Corporation

Pipe Tongs
W. K. M. Company

Pipe Vises
J. H. Williams & Co.

Pipe Wrenches
Dunn Manufacturing Co.
The Guiberson Corporation
Larco Wrench & Mfg. Corp.
J. H. Williams & Co.

Portable Buildings
Butler Mfg. Co.
International Derrick & Equipment Co.

Portable Compressors
Gardner Governor Co.
Ingersoll-Rand Co.
Sullivan Machinery Co.

Portable Drilling Rigs
Bridgeport Machinery Co.
Lee C. Moore & Co.
Parkersburg Rig & Reel Co.
The National Supply Cos.

Pulleys
International Derrick & Equipment Co.
Lee C. Moore & Co.

Pulling Machines
Clark Machine Co.
Myrick Machine Co.
Thrift Hydraulic Casing Pulling Co.

Pumps
American Well & Pros. Co.
Atlas Supply Co.
Continental Supply Co.
Gardner Governor Co.
Frick-Reid Supply Co.
Gaso Pump & Burner Mfg. Co.
The Goulds Mfg. Co.
Ingersoll-Rand Co.
Lucey Manufacturing Corp.
Norris Bros.
National Transit Pump & Machine Co.
The National Supply Cos.
Oil Well Supply Co.
Pelican Well Tool & Sup. Co.
Southern Engine & Pump Co.
United Iron Works, Inc.

Pumping Powers
Kansas City Hay Press & Tractor Co.

Refined Products
Empire Refineries, Inc.
Gulf Refining Company
Humble Oil & Refining Co.
Sinclair Consolidated Co.
Standard Oil Co. of N. J.
Sunshine State Oil & Ref. Co.
The Texas Company
Union Petroleum Co.
White Oil Corp.

Reamers
Jones Oil Well Reamer Co.

Recorders
Fort Worth Laboratories
The Foxboro Co., Inc.

Refinery Equipment
Atlas Supply Co.
Butler Mfg. Co.
Chicago Bridge & Iron Works
Frick-Reid Supply Co.
Gardner Governor Co.
Kansas City Struct. Steel Co.
Petroleum Iron Works Co.
Phoenix Iron Works Co.
Titusville Iron Works
Tulsa Boiler & Sheet Iron Wks.
United Iron Works, Inc.
Wyatt Metal & Boiler Works

Rig Irons
Continental Supply Co.
Frick-Reid Supply Co.
Lucey Manufacturing Corp.
Lee C. Moore & Co.
The National Supply Cos.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.

Rotary Rock Bits
Hughes Tool Co.

Rotary Fish Tail Bits
Continental Supply Co.
Pelican Well Tool & Sup. Co.

Rotary Slips
W. K. M. Company

Separators
Butler Mfg. Co.
De Laval Separator Co.
Gardner Governor Co.
Trumble Gas Trap Co.

Strainers
Layne & Bowler Co.
J. H. McEvoy & Co.
Pelican Well Tool & Sup. Co.

Structural Steel
Butler Mfg. Co.
Kansas City Struct. Steel Co.
Pennsylvania Tank Car Co.
United Iron Works, Inc.

Steel Derricks
International Derrick & Equipment Co.

Steel Crown Blocks
Gulf Coast Mach. & Sup. Co.
Lee C. Moore & Co.
Parkersburg Rig & Reel Co.
Superior Tube Co.
Texas Supply Co.

Steel Storage Tanks
Butler Mfg. Co.
Chicago Bridge & Iron Works
The Petroleum Iron Works Co.
Phoenix Iron Works Co.

Sucker Rod Lines
D. F. Connolly Agency.

Sucker Rods
Dunn Manufacturing Co.
Norris Bros.
The National Supply Cos.

Stills
The Petroleum Iron Works Co.

Tank Cars
Pennsylvania Tank Car Co.

Tanks
American Tank Co.
Butler Mfg. Co.
Black, Sivalls & Bryson
The Brownell Co.
Chicago Bridge & Iron Works
Columbian Steel Tank Co.
Kansas City Struct. Steel Co.
Maloney Tank Co.
Petroleum Iron Works
Phoenix Iron Works
Parkersburg Rig & Reel Co.
Tulsa Boiler & Sheet Iron Wks.
United Iron Works Co.
Wyatt Metal & Boiler Works

Tret-O-Lite
W. S. Barnickel & Co.

Thermometers
Fort Worth Laboratories
The Foxboro Co., Inc.

Threading Machines
Williams Tool Corporation

Tongs
Bridgeport Machine Co.
Dunn Manufacturing Co.
Guiberson Corporation
Norris Bros.
Pelican Well Tool & Sup. Co.
Wilson & Willard Mfg. Co.
J. H. Williams & Co.

Tool Joints
American Well & Pros. Co.
Bridgeport Machine Co.
Hughes Tool Co.
The National Supply Cos.
Pelican Well Tool & Sup. Co.
W. K. M. Company

Tools (Fishing and Drilling)
Bridgeport Machine Co.
Frick-Reid Supply Co.
Hughes Tool Co.
Lucey Manufacturing Corp.
The National Supply Cos.
Oil Well Supply Co.
Peden Iron & Steel Co.
Pelican Well Tool & Sup. Co.
Sullivan Machinery Co.

Traveling Blocks
American Well & Pros. Co.
Boykin Machinery & Sup. Co.
Continental Supply Co.
Gulf Coast Machine & Sup. Co.
Lufkin Foundry & Machine Co.

Tubing Catcher
Dunn Manufacturing Co.
Guiberson Corporation

Tubing Lines
D. F. Connolly Agency.

Tubing
Interstate Pipe Co.
Reading Iron Co.
Standard Seamless Tube Co.

Under-reamers
American Well & Pros. Co.
Bridgeport Machine Co.
Western Supply Co.
Wilson & Willard Mfg. Co.

Vacuum Pumps
Gardner Governor Co.
Ingersoll-Rand Co.
Sullivan Machinery Co.

Valves
Chapman Valve Co.
Darling Valve & Mfg. Co.
The Charles N. Hough Mfg. Co.
The Kelly & Jones Co.
Ludlow Valve Mfg. Co.
Pratt & Cady.
Reading Steel Castings Co.
Reading Valve & Fittings Co.
Westcott Valve Mfg. Co.

Valves and Fittings
Atlas Supply Co.
Chapman Valve Co.
Continental Supply Co.
Darling Valve & Mfg. Co.
Frick-Reid Supply Co.
F. W. Heitmann Co.
The Kelly & Jones Co.
Lucey Manufacturing Corp.
Ludlow Valve Mfg. Co.
Lufkin Foundry & Machine Co.
The National Supply Cos.
Norris Bros.
Peden Iron & Steel Co.
Wm. Powell Co.
Pratt & Cady
Reading Steel Casting Co.
Reading Valve & Fittings Co.
Southern Brass Mfg. Co.
United Iron Works

Walking Beams
International Derrick & Equipment Co.

Working Barrels
The Charles N. Hough Mfg. Co.

Wrenches
Larco Wrench Co.

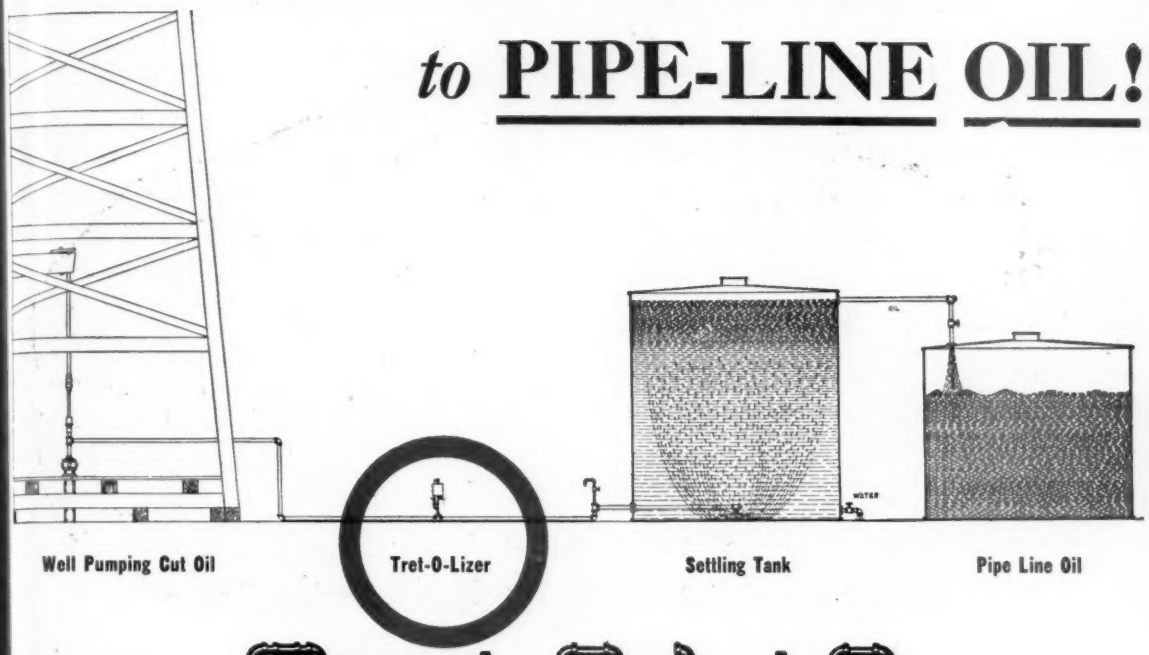
Water Gauges
F. W. Heitmann Co.

Wire Fence
Page Steel & Wire Co.

Wire Rope
Bridgeport Machine Co.
D. F. Connolly Agency.
Continental Supply Co.
The National Supply Cos.
Williamsport Wire Rope Dist. Co.

From CUT OIL AND "B. S."—

to PIPE-LINE OIL!



via the Tret-O-lite process

Reg. U. S. Pat. Off.

The above well is pumping "CUT OIL"—yet **pipe line oil** is flowing into the pipe line tank.

This miracle has been worked by the little Tret-O-Lizer in the red circle. (See cut at bottom of page.)

Here is shown the **simplest** form of Tret-O-Lite plant—and it illustrates the extreme simplicity of the Tret-O-Lite process.

Undiluted Tret-O-Lite is merely fed into the flow line from the small reservoir in the red circle. Mixing with the cut oil it breaks the emulsion. Oil and water separate in the settling tank.

No other method is so simple, so complete, so rapid, so economical.

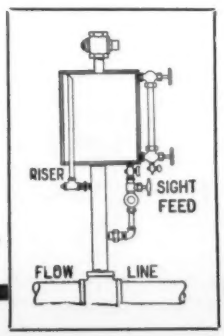
Our handsome new book "TRET-O-LITE," is free. Write for it.

NOTE:—The Tret-O-Lite process is fully protected by valid process patents.

Representatives in All Principal Oil Fields

WM. S. BARNICKEL & CO.

ST. LOUIS, MO.



Enlarged View of Tret-O-Lizer.

Office and Factory:
Webster Groves,
St. Louis Co,, Mo.

Trying to drill through hard rock with a "fish tail" bit is just one "round trip" after another. You're always coming out to change bits.

Fish tail bits are not made to make hole through rock.

Save these expensive "in and out" trips. Make hole fast with least expense

THROUGH ALL ROCK
WITH A HUGHES ROCK BIT

Ask Your Supply Store for Hughes Rock Bits

Also Manufacturers of HUGHES Tool Joints, and HUGHES Weight Indicators

Hughes Tool Co.

HOUSTON, TEXAS, U. S. A.

Branch, Los Angeles, Calif.